85-1165

No. 85-

Supreme Court, U.S.
FILED
JAN 10 1986
JOSEPH F. SPANIOL, JR.
CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1985

NANTAHALA POWER AND LIGHT COMPANY, TAPOCO, INC., and ALUMINUM COMPANY OF AMERICA,

Appellants,

—v.—

STATE OF NORTH CAROLINA ex rel. UTILITIES COMMISSION; LACY H. THORNBURG, Attorney General, et al.,

Appellees.

ON APPEAL FROM THE SUPREME COURT OF NORTH CAROLINA

APPENDIX TO JURISDICTIONAL STATEMENT

REX E. LEE*
DAVID W. CARPENTER
SIDLEY & AUSTIN
1722 Eye St., N.W.
Washington, D.C. 20006
(202) 429-4000

Counsel for Appellants

Of Counsel:

RONALD D. JONES
DAVID R. POE
M. REAMY ANCARROW
LEBOEUF, LAMB, LEIBY & MACRAE

EDWARD S. FINLEY, JR.
WILLIAM D. JOHNSON
GRADY L. SHIELDS
HUNTON & WILLIAMS

**Counsel of Record*

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APPENDIX A

Opinion of the North Carolina Supreme Court

STATE OF NORTH CAROLINA EX REL. UTILITIES COMMISSION; RUFUS L. EDMISTEN, ATTORNEY GENERAL; PUBLIC STAFF; HENRY J. TRUETT; SWAIN COUNTY BOARD OF COUNTY COMMISSIONERS; CHEROKEE, GRAHAM AND JACKSON COUNTIES; TOWNS OF ANDREWS, BRYSON CITY, DILLSBORO, ROBBINSVILLE, AND SYLVA; AND THE TRIBAL COUNCIL OF THE EASTERN BAND OF CHEROKEE INDIANS; DEROL CRISP v. NANTAHALA POWER AND LIGHT COMPANY; ALUMINUM COMPANY OF AMERICA; AND TAPOCO, INC.

No. 111A84

(Filed 13 August 1985)

On appeal by respondents from the decision of the Court of Appeals reported at 66 N.C. App. 546, 311 S.E. 2d 619 (1984), affirming orders entered 8 June 1982, 12 August 1982, and 1 September 1982 by the North Carolina Utilities Commission in Docket No. E-13, Sub 35. Heard in the Supreme Court 10 September 1984.

This litigation began on 31 December 1980 when Nantahala Power and Light Company (Nantahala) applied to the North Carolina Utilities Commission for authority to adjust and increase its retail electric rates and charges and to place into effect a revised Purchased Power Cost Adjustment Clause applicable to all retail electric rates. The rates and charges proposed by Nantahala were based on a test period ending 31 December 1979 and were proposed to become effective for service rendered on and after 1 February 1981. On 16 July 1981 the Commission joined Aluminum Company of America (Alcoa) and Tapoco, Inc. as parties to the proceeding. Adjudicatory hearings in this general rate case began in September 1981, and on 8 June 1982 the Commission entered an order increasing rates to some extent and requiring a refund of monies that

Nantahala had overcharged its retail ratepayers. Alcoa was ordered to make the refunds to the extent that Nantahala is unable to do so. Respondents appealed, and the Court of Appeals affirmed. Respondents appealed to this Court pursuant to N.C.G.S. 7A-30(3).

Rufus L. Edmisten, Attorney General, by Richard L. Griffin, Assistant Attorney General, for the Using and Consuming Public.

Robert Gruber, Executive Director, The Public Staff, by James D. Little, Staff Attorney, for the Using and Consuming Public.

Joseph A. Pachnowski, for the County of Swain and the Town of Bryson City.

Crisp, Davis, Schwentker & Page, by William T. Crisp and Robert B. Schwentker, for Henry J. Truett, Counties of Cherokee, Graham, Swain, Jackson, Towns of Andrews, Dillsboro, Robbinsville, Bryson City, Sylva, and the Tribal Council of the Eastern Band of the Cherokee Indians.

Western North Carolina Legal Services, Indian Law Unit, by Larry Nestler, for Derol Crisp.

Hunton & Williams, by Edward S. Finley, Jr., for Nantahala Power and Light Company.

LeBoeuf, Lamb, Leiby & MacRae, by Ronald D. Jones and David R. Poe, for Aluminum Company of America and Tapoco, Inc.

MARTIN, *Justice*.

A number of questions of law at issue in this case have been resolved by this Court's recent opinion in *State ex rel. Utilities*

Commission v. Nantahala Power and Light Company, ____ N.C. ____, ____ S.E. 2d ____ (No. 227A83, filed 3 July 1985) (Nantahala Sub 29 (Remanded)). We therefore refer to that opinion for an explanation of the following holdings which apply equally to the instant case: (1) Tapoco and Alcoa are North Carolina public utilities subject to the Commission's regulatory authority and jurisdiction;[1] (2) utilization of a roll-in theory does not violate the Federal Power Act or the supremacy clause or the commerce clause of the Constitution of the United States; (3) application of a roll-in methodology such as is used in this case does not impermissibly impair Nantahala's ability to earn a proper rate of return on its investment and does not amount to a confiscation of its properties; (4) prior federal and state regulation of Nantahala, Tapoco, and Alcoa and various transactions and the power supply agreements affecting Nantahala's power supply do not

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1 We reject Tapoco's argument that the Commission erroneously involuntarily joined Tapoco as a party to these proceedings. Rule 19 of the North Carolina Rules of Civil Procedure provides in part:

> "Rule 19 Necessary joinder of parties
>
> "(a) Necessary joinder. Subject to the provisions of Rule 23, those who are united in interest must be joined as plaintiffs or defendants; but if the consent of anyone who should have been joined as plaintiff cannot be obtained he may be made a defendant, the reason therefor being stated in the complaint; provided, however, in all cases of joint contracts, a claim may be asserted against all or any number of the persons making such contracts.
>
> "(b) Joinder of parties not united in interest. The court may determine any claim before it when it can do so without prejudice to the rights of any party or to the rights of others not before the court; *but when a complete determination of such claim cannot be made without the presence of other parties, the court shall order such other parties summoned to appear in the action.*" (Emphasis added.)

See Strickland v. Hughes, 273 N.C. 481, 160 S.E. 2d 313 (1968) (decided under former N.C.G.S. 1-73); *Moore v. Massengill*, 227 N.C. 244, 41 S.E. 2d 655 (1947) (same). *See generally* W. Shuford *N.C. Civil Practice and Procedure* § 19-4 (1981). The decision whether to order joinder of proper parties rests within the sound discretion of the Utilities Commission in its authority as an adjudicatory body. N.C. Gen. Stat. § 62-60 (1982). Tapoco has failed to establish that the Commission abused its discretion in ordering Tapoco joined as a party in the instant proceedings.

prohibit or preempt the Commission from piercing the corporate veil between Alcoa and Nantahala; (5) the Commission acted within its regulatory authority in imposing an obligation upon Alcoa to pay any part of the refund obligation arising from reduction in retail rates that Nantahala is financially unable to make, and this obligation does not amount to a confiscation of Alcoa's property.

With the aforesaid issues already resolved as a matter of law, we now turn to those issues peculiar to this proceeding. We begin with Alcoa's and Nantahala's contentions that certain of the Commission's findings of fact are not supported by evidence of record. It is well established that an appellate court will not disturb the findings of fact of the Utilities Commission as long as, upon an examination of the whole record, they are supported by competent, material, and substantial evidence. N.C. Gen. Stat. § 62-94 (1982); *State ex rel. Utilities Commission v. Public Staff*, 309 N.C. 195, 306 S.E. 2d 435 (1983); *State ex rel. Utilities Comm. v. Southern Bell*, 307 N.C. 541, 299 S.E. 2d 763 (1983).

Preliminarily, we address Alcoa's contention that although the Commission stated in its 13 March 1981 ruling that it would determine whether roll-in is appropriate in Sub 35 independently and irrespective of whether such a determination is required in Docket No. E-13, Sub 29, certain parts of the Commission's 8 June 1982 order clearly show that the Commission in effect merely adopted its Sub 29 (Remanded) order for the purpose of determining the outcome of this proceeding instead of making independent findings and conclusions. Alcoa points out, for example, that the June 8 order refers to a "witness Popovich" who testified during the Sub 29 proceedings but not during the proceedings in the instant case. In addition, Alcoa contends that findings of fact 4, 5, 6, 17, and 20 of the June 8 order are so similar to findings of fact 4, 5, 6, 19, and 21 of the Sub 29 (Remanded) order that it is clear that the two orders are "essentially identical."

We might be impressed by the agility of Alcoa's legal stratagems but for its occasional opacity. It is true that witness

Popovich testified during proceedings in Sub 29; however, in the "Response on Behalf of Aluminum Company of America and Tapoco, Inc. to Motion to Join Alcoa and Tapoco as Parties" filed in Sub 35 on 6 February 1981, we find the statement that "Tapoco and Alcoa hereby incorporate by reference the testimonies and briefs filed with this Commission in Docket No. E-13, Sub 29."[2] As Alcoa presented the Commission with the opportunity to consider witness Popovich's testimony in the instant case, it is curious that Alcoa is now trying to argue that the Commission erroneously did so.

Further, the fact that five of the findings of fact in the two proceedings are similarly worded does not indicate that the Commission did not consider evidence presented before it in the proceedings in the instant case. The issues addressed in the findings to which Alcoa refers us arose in both the Sub 29 (Remanded) and the Sub 35 cases, and because the Commission resolved them consistently, it is not particularly strange that its findings are similarly worded.[3] There is no error with respect to this aspect of the Commission's order in the present case, and we hold that Alcoa's rights to due process were not violated by the manner in which the Commission proceeded.

We now address Alcoa's contention that several of the Commission's findings of fact are unsupported by evidence of record and that the roll-in theory the Commission used in the present case was inappropriate because based on the erroneous findings of fact. Alcoa alleges that the following six points were not supported by evidence of record:

> (1) that testimony of witness Popovich was properly before the Commission in this proceeding;
>
> (2) that Tapoco does not wheel power Alcoa purchases from the Tennessee Valley Authority (TVA) to serve Alcoa in Tennessee;

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2 In the instant case Nantahala, too, incorporates by reference part of its brief to this Court in the Sub 29 (Remanded) appeal.

3 We note that the New Fontana Agreement and the 1971 Apportionment Agreement were still in effect during the test period in which rates were based in the instant case.

(3) the Commission's decisions to include in the roll-in calculations power Nantahala purchased from TVA to serve Nantahala's North Carolina load but to exclude power Alcoa purchased from TVA to serve Alcoa's Tennessee load;

(4) the Commission's calculation of "hidden benefits" to Alcoa arising out of the Original Fontana Agreement, the New Fontana Agreement, and the Apportionment Agreement;

(5) the Commission's determination of the appropriateness of piercing the corporate veil between Alcoa and Nantahala;

(6) that the Nantahala and Tapoco facilities are integrated and coordinated with one another and therefore rolling their costs together was appropriate.

We have discussed and disposed of the first contention earlier in this opinion. The fifth point is governed by our conclusions to the contrary in Nantahala Sub 29 (Remanded). Thus, we now turn to the remaining contentions.

Because it concerns the question of whether a roll-in is appropriate to any extent, we address the fourth point first. Alcoa argues that the record does not support the Commission's finding that Alcoa received concealed benefits and therefore it is inappropriate to use any form of roll-in to rectify past inequities. The basis of Alcoa's argument is that "[t]he calculation of 'hidden benefits' that the Commission used to justify the imposition of rolled-in rate making in the first place (*see* R pp 183-208), was repudiated by the only witness to offer testimony as to the existence of hidden benefits." Upon an examination of the transcript, we do not find the direct repudiation alleged by Alcoa. In addition, there is ample evidence in the form of exhibits justifying the Commission's determination that Alcoa was the recipient of hidden benefits. We cannot agree with this assignment of error.

Alcoa also contends that evidence placed before the Commission during the proceedings in this case contradicted evi-

dence which was before the Commission in the Sub 29 (Remanded) case concerning the physical integration of the Tapoco-Nantahala system. Therefore, the Commission's determination that the system is physically integrated is erroneous, and because this factual predicate to the use of roll-in has not been established, the use of any roll-in methodology was also error. We again disagree. Although respondents did introduce additional evidence concerning this issue during proceedings in the instant case, we find that the record amply supports the Commission's findings that (a) Nantahala has not been designed, developed, or operated as a stand-alone electric system, (b) the Nantahala and Tapoco electric facilities constitute a single integrated electric system, and (c) the two corporate affiliates should be treated as a single utility system for rate making purposes in view of their historical development, actual operating conditions, and the fact that Nantahala's customer cost responsibility cannot be accurately determined using a "stand-alone" model. The Commission properly determined that a roll-in methodology for rate making in this case was appropriate. The assignment of error is meritless.

We also reject Nantahala's contention that the Commission's 8 June 1982 order is deficient as a matter of law because although it sets retail electric rates prospectively and anticipates that Nantahala may not be able financially to pay refunds anticipated because of rate reductions, it does not require Alcoa as Nantahala's parent to pay refunds which Nantahala is unable to make. To the contrary, the Commission's finding of fact 20 states in part that "to the extent Nantahala is financially unable to make the revenue refunds required in this Order, Alcoa shall refund all or any portion of the aforementioned revenue refunds that Nantahala is financially unable to make." Earlier findings of fact in the order specify that refunds are required for rate reductions provided for in this rate case. At the end of the order the Commission further states: "IT IS, THEREFORE, ORDERED as follows: . . . 7. That, to the extent Nantahala is financially unable to make revenue refunds required under Ordering Paragraph No. 3

above, Alcoa shall refund all or any portion of the aforementioned revenue refunds that Nantahala is financially unable to make." Nantahala's assignment of error is meritless.

We now turn to the issue of whether Tapoco wheels to Alcoa power which Alcoa owns. In its 8 June 1982 order the Commission found as a fact that Tapoco does not wheel certain power which Alcoa buys directly from TVA for Alcoa's sole use for its industrial plant operations in Tennessee. The Commission further reasoned that, assuming for purposes of argument that Tapoco did wheel this power, such power was not integrated within the combined Tapoco-Nantahala system. For both of these reasons the Commission declined to "roll-in" the costs associated with this purchased power when determining Nantahala's retail rate base. The Commission also concurred with the intervenors' contention that "should the separate $52 million of Alcoa purchases directly from TVA be rolled into the total power purchases of the Nantahala-Tapoco unified system, those purchases should be allocated entirely to Alcoa."

Alcoa argues that the Commission's findings were erroneous because all of the evidence shows that Tapoco does in fact wheel the power Alcoa purchases from TVA and therefore, because this power traversed the Tapoco Nantahala system, its costs should have been rolled into the Commission's calculations.

As the Commission noted, "wheeling" is a term used to denote the transmission of one utility's power over another utility's system. *See Town of Norwood v. Fed. Energy Reg. Com'n,* 587 F.2d 1306, 1307 n. 2 (1978); *Utah Power and Light Company v. Morton*, 504 F. 2d 728 (1974); *Idaho Power Company v. Federal Power Commission*, 346 F. 2d 956, 957 n. 1 (1965). Although evidence in the record conflicts as to whether Tapoco wheels power to Alcoa, the Commission's determination that Tapoco does not wheel is supported by competent, material, and substantial evidence and therefore we do not disturb it. A key exhibit in this regard is a contract identified by Alcoa's witness H. J. Vander Veen as the FERC Rate Schedule which governs the alleged wheeling agreement.

This contract which became effective in 1968 and continues until 1 March 2005, states in part:

> It is desirable to reduce to writing the arrangement between Tapoco, Inc. (Tapoco) and Aluminum Company of America (Alcoa) under which power delivered to Alcoa (from Tapoco and other sources) is transformed and switched at the high voltage substation facilities of Tapoco, located adjacent to the Alcoa, Tennessee works of Alcoa. Accordingly it is proposed that we agree as follows:
>
> (a) At the substation facilities mentioned above, Tapoco will perform such necessary transformation and switching of power delivered to Alcoa as Alcoa shall direct . . .

The language in these paragraphs indicates that the contract governs merely the transformation and switching of Alcoa's power at substations adjacent to Alcoa plants. This substation facilities contract does not concern or address the transmission of power over Tapoco lines denoted by the term "wheeling." We find the Commission's determination that Tapoco does not wheel Alcoa's power to be supported by material and substantial evidence of record and therefore do not disturb it.

We note, however, that the Commission properly determined that even if Tapoco does, arguendo, wheel power which Alcoa purchases from TVA for use at Alcoa's Tennessee plants, the costs associated with such purchases should not be considered as a component of the roll-in methodology. As the Commission observed, no showing was made that this power was integrated within the Tapoco-Nantahala system with respect to the public load served by these utilities. As this Court stated in *Nantahala Sub 29 (Remanded),* slip op. at 87, _____ S.E. 2d at _____, "the Commission accepted that the non-utility direct industrial purchases that Alcoa makes from TVA are not properly considered a *utility* function of either Tapoco, Nantahala or the combined utility system of both and so are not properly includable in the cost of service allocation." We agree with the

Commission's reasoning on this point and find it to be equally applicable to the present case. Therefore costs associated with such purchases were also properly excluded in the roll-in calculations performed by the Commission in the instant case.

We now turn to other findings that respondents contend are not supported by evidence of record. Both Alcoa and Nantahala allege that the commission made several mathematical errors when using the roll-in technique. Specifically, they argue that the Commission's attributions of capacity to Nantahala and Tapoco individually were erroneous and therefore the roll-in methodology using such figures resulted in erroneous computations. The basis for these alleged errors is the fact that instead of adopting the roll-in methodology proposed by respondents' witnesses, a methodology which would have determined the utilities' capacities based on return entitlements set forth in the New Fontana Agreement, the Commission adopted the intervenors' methodology. Under the latter, Nantahala's costs were determined by a consideration of actual combined system capabilities, not by the way in which Nantahala and Tapoco share in the New Fontana Agreement entitlements (as determined by the 1971 Apportionment Agreement). We hold that the Commission did not err in using the roll-in methodology proposed by the intervenors; therefore the Commission did not err by using the capacity assignments which it did. As we stated in *Nantahala Sub 29 (Remanded),* slip op. at 93-94, _____ S.E. 2d at _____:

> The roll-in technique chosen by the Commission is fully supported by substantial evidence of record and is a determination which essentially rests within the discretion of the Commissi in the exercise of its rate making function. As the United States Supreme Court has observed in reviewing a similar regulatory question, "judgment and discretion control both the separation of property and the allocation of costs when it is sought to reduce to its component parts a [utility] business which functions as an integrated whole." *Colorado Interstate Gas Co. v. FPC,* 324 U.S. at 591, 89 L.Ed. at 1217.

The Commission did not abuse its discretion in adopting the roll-in methodology which it did, and within this methodology its calculations of capacity were not erroneous. Therefore we reject respondents' arguments concerning these issues.

Alcoa goes on to argue that the Commission ignored certain evidence placed before it with respect to an alternative roll-in methodology proposed by John C. Romano, an engineer with the Public Staff.[4] There is no evidence that the Commission ignored this study when deciding which roll-in methodology would be appropriate in this proceeding. As we held earlier, the Commission did not abuse its discretion in employing the particular methodology which it did. We hold that all parties received a full and fair hearing during the proceedings in this case. Respondents' assignment of error is meritless.

The foregoing issues are determinative of this appeal. We hold that there is no merit to any of respondents' assignments of error. Therefore we affirm the decision of the Court of Appeals.

Affirmed.

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4 It is Nantahala's position that the Commission properly rejected Romano's proposed roll-in because of flaws in its methodology.

APPENDIX B

Opinion of the North Carolina Court of Appeals

STATE OF NORTH CAROLINA, ex rel. Utilities Commission; RUFUS L. EDMISTEN, ATTORNEY GENERAL; PUBLIC STAFF; HENRY J. TRUETT; SWAIN COUNTY BOARD OF COUNTY COMMISSIONERS; CHEROKEE, GRAHAM AND JACKSON COUNTIES; TOWNS OF ANDREWS, BRYSON CITY, DILLSBORO, ROBBINSVILLE, and SYLVA; and THE TRIBAL COUNCIL OF THE EASTERN BAND OF CHEROKEE INDIANS; DEROL CRISP v. NANTAHALA POWER AND LIGHT COMPANY; ALUMINUM COMPANY OF AMERICA; and TAPOCO, INC.

No. 8210UC1289

(Filed 21 February 1984)

APPEAL by respondents from order of North Carolina Utilities Commission entered 8 June 1982. Heard in the Court of Appeals 24 October 1983.

This is an appeal from an order of the North Carolina Utilities Commission reducing rates and requiring a refund by Nantahala Power and Light Company and Alcoa. This case is similar in many ways to another rate case which has been in the appellate courts of this state. *See Utilities Comm. v. Edmisten, Attorney General*, 40 N.C. App. 109, 252 S.E. 2d 516 (1979), *aff'd in part and rev'd in part*, 299 N.C. 432, 263 S.E. 2d 583 (1980) and *State ex rel. Util. Comm'n v. Nantahala Power*, 65 N.C. App. 198, 309 S.E. 2d 473 (1983). We refer to those cases for a more detailed statement of facts. We note that the New Fontana Agreement (NFA) and the 1971 Apportionment Agreement expired by their own terms on 31 December 1982. Nantahala has now negotiated, independently of Alcoa and Tapoco, an interconnection agreement with TVA. *See* Notice of Decision and Order In the Matter of Nantahala Power and Light Company, Docket No. E-13, Sub. 44, State of North Carolina Utilities Commission.

Nantahala filed on 31 December 1980 an application to increase its rates for retail electrical services effective 1 February 1981. On 16 July 1981 Alcoa and Tapoco were joined as parties to the proceedings. After a panel had taken evidence, the Commission entered an order in which it found that Nantahala, Tapoco, and Alcoa are public utilities under Chapter 62 of the General Statutes. The Commission also found that the NFA and the 1971 Apportionment Agreement resulted in substantial benefits to Alcoa to the significant detriment of the customers of Nantahala and the Nantahala and Tapoco systems should be treated as one entity in setting retail rates for Nantahala. The Commission found that Nantahala's rates were excessive and ordered a refund to its North Carolina retail customers. Alcoa was ordered to make the refunds to the extent Nantahala is financially unable to do so.

Respondents appealed.

Attorney General Edmisten, by Assistant Attorney General Richard L. Griffin, and Executive Director of The Public Staff Robert Fischback, by Staff Attorney Thomas K. Austin, for the Using and Consuming Public.

Crisp, Davis, Schwentker and Page, by William T. Crisp and Robert B. Schwentker, for Henry J. Truett; the Counties of Cherokee, Graham, Swain, Jackson; Towns of Andrews, Dillsboro, Robbinsville, Bryson City, Sylva; and the Tribal Council of the Eastern Band of the Cherokee Indians.

Joseph A. Pachnowski for the County of Swain and the Town of Bryson City.

Western North Carolina Legal Services, Indian Law Unit, by Larry Nestler, for Derol Crisp.

LeBoeuf, Lamb, Leiby and MacRae, by Ronald D. Jones and David R. Poe, for Aluminum Company of America and Tapoco, Inc.

Hunton and Williams, by Robert C. Howison, Jr., James E. Tucker, and Edward S. Finley, Jr., for Nantahala Power and Light Company.

WEBB, *Judge*.

Appellants contend (1) the Utilities Commission is preempted by Federal Energy Regulatory Commission regulations from setting rates that ignore the NFA and the 1971 Apportionment Agreement; (2) the Commission has unconstitutionally burdened interstate commerce; (3) the Commission has intruded into the exclusive and preemptive jurisdiction of the FERC under the Federal Power Act; (4) the Commission did not base its findings that Nantahala and Tapoco constitute a single integrated system and should be treated as one entity with respect to determining rates to applicant's retail customers on evidence in the record but treated these matters as findings by the Supreme Court; (5) the Utilities Commission has disregarded the determination by the FERC in Nantahala Power and Light Co., 19 FERC [CCH] par. 61, 152 (May 14, 1982) and 20 FERC [CCH] par. 61, 430 (September 30, 1982) that the power exchange agreements are reasonable; (6) that the Commission was in error in finding concealed benefits to Tapoco and Alcoa in the power exchange agreements; (7) that the roll-in is fatally flawed because it does not allocate 100% of the demand factors for Nantahala and Tapoco; and (8) that Alcoa and Tapoco are not North Carolina public utilities. We overrule all these assignments of error on the basis of our opinion reported at 65 N.C. App. 198, 309 S.E. 2d 473 (1983).

Nantahala argues that the Commission has erroneously assumed that our Supreme Court directed in its opinion that the Commission set rates through the implementation of a roll-in. Nantahala contends that as a result the Commission treated certain statements in the Supreme Court's opinion as findings of fact and did not consider some of the evidence. Nantahala says that the Commission did not consider uncontradicted

evidence that on an hour to hour basis, which is the only way it can be considered, that Nantahala's generation is poorly suited to meet its load. It argues that the Commission ignored evidence as to the distinction between primary and secondary energy, which evidence shows that under the NFA and the 1971 Apportionment Agreement, Nantahala fares better than Tapoco and Alcoa. Nantahala also argues that the Commission ignored evidence that Nantahala and Tapoco are not an integrated company but quoted from our Supreme Court's opinion that they are, and accepted our Supreme Court's conclusion as an established fact.

Nantahala argues that the Commission did not properly analyze the NFA and the 1971 Apportionment Agreement and if it had it would have concluded the power exchange agreements are fair and the roll-in used is not fair. It contends that the Commission assumed that Nantahala traded its generation for something of less value, which assumption is not correct. Nantahala argues that the value of its generation as a stand-alone system is not as valuable as the Commission assumed. It does not generate enough power at the right time to serve its customers and not enough reserve for maintenance allowance was assigned to it by the Commission. Nantahala argues that the only way the Commission could assign so small a reserve is by considering it a part of the TVA system which cannot be done without the NFA and the 1971 Apportionment Agreement which the Commission refused to recognize in setting rates.

Nantahala argues further that the Commission erroneously assumed that its generation is of the same value to its customers that it is to TVA. This is not correct because TVA can utilize all the energy when generated by Nantahala while Nantahala's customers cannot do so. For this reason, in a bargain with TVA, Nantahala has to take less energy than it gives in order to secure firm energy which is useful to its customers. Both Nantahala and Tapoco received less energy than they gave, but this does not prove Nantahala was short-changed in the bargain. It simply proves that neither could

bargain with TVA to get the same amount of energy they generated. No analysis was made to determine whether Tapoco had benefitted at the expense of Nantahala in the power exchange agreements, and if such an analysis had been made, it would be found that there was no such benefit.

Nantahala argues that the Commission is wrong in its finding that the NFA is unfair to Nantahala. The evidence is that Nantahala received sufficient energy under it to meet its needs for the first ten years of its existence. It says the evidence shows that the 1963 Agreement was negotiated in conjunction with a sales contract under which Nantahala sold energy to Tapoco. The Commission voided this sales contract and the parties then renegotiated the apportionment agreement. It does not mean the 1971 Agreement is unfair because the 1963 Agreement contained terms more favorable to Nantahala.

Nantahala makes a persuasive argument which we might accept if our function were the same as the Utilities Commission. It is not our function to find the facts or to dictate to the Utilities Commission the weight to be given material facts. The evidence in this case as to the unfairness of the NFA and the 1971 Apportionment Agreement to the customers of Nantahala was similar to the evidence adduced in the case previously decided. *See Nantahala Power*, 65 N.C. App. at 209-10, 309 S.E.2d at 482-83. The Commission's findings of fact were similar in both cases. We believe the evidence was sufficient to support these findings of fact and we cannot disturb the weight given to the facts found.

The appellants argue that the Commission has set rates that will not allow Nantahala to recover its costs, has required a refund in excess of the net worth of Nantahala and that this confiscates the assets of Nantahala and Alcoa in violation of the Fourteenth Amendment to the Constitution of the United States and Article I, § 19 of the North Carolina Constitution. They also argue that this violates G.S. 62-133 which requires that a public utility be given an adequate rate of return. In light of our holding that the Utilities Commission set a reasonable rate of return we overrule these assignments of error.

Alcoa and Tapoco contend that the cause should be remanded to the Utilities Commission to consider the evidence. We believe that the Commission has made findings of fact based on the evidence which supports its order. This assignment of error is overruled.

Alcoa and Tapoco contend they were denied a fair hearing because the same panel of the Utilities Commission conducted the hearing that conducted the hearing in the previous case. Prior to the hearing, Nantahala made a motion that none of the Commissioners who heard the case in the previous docket be assigned to this case. This motion was denied. Alcoa and Tapoco argue that since the panel's findings of fact and order in this docket is almost identical to its findings of fact and order in the previous docket, although the evidence is different, this shows the bias of the panel. We do not believe we should hold that because the panel made very similar findings of fact and conclusions of law in both cases that this shows they were biased. We believe the evidence in this case supports the findings of fact. We presume the panel based its findings on the evidence. We do not believe the members of the panel had to be disqualified because they had heard a previous case involving the same parties and issues.

Alcoa and Tapoco argue that the Commission could not pierce the corporate veil of Alcoa and Tapoco. Although the Commission recited, "that it should pierce the corporate veil" we do not believe this was done. It did not disregard the corporate entity of either Alcoa or Tapoco. It did treat Nantahala and Tapoco as being one integrated utility for the purpose of setting rates and it did require Alcoa to be responsible for a part of the refund. We do not believe it was necessary to pierce the corporate veil of either Tapoco or Alcoa to do this.

Alcoa and Tapoco argue that the finding that Nantahala and Tapoco are one integrated utility is not supported by the evidence. They argue that the Utilities Commission readopted its order in the previous docket although the evidence was substantially different. There was evidence in the record that the two companies traded all their power to TVA and received

one entitlement in return which they divided between them. Although there is contrary evidence in the record, we believe this was substantial evidence which supports the finding of the Commission.

Tapoco and Nantahala argue that the allocation of costs by the Commission is without rational basis in the record. They say this is so because the Commission should have held that Tapoco wheels power bought by Alcoa from the TVA and this power should have been included in the power of the combined system. They argue that the Commission based its determination not to include this power on three additional grounds none of which are valid. They are (1) the Alcoa-TVA purchases are far greater than other sources of power transmitted by the combined system; (2) the Alcoa-TVA purchases are not suited to the public load; and (3) to include the TVA purchases by Alcoa would "warp and twist" the cost allocation methodology resulting in a cost increase to Nantahala. They say that it is irrelevant whether Alcoa's TVA purchases are large or small, that Nantahala's TVA purchases are not suited to Alcoa's Tennessee operations, and yet they are included, and the fact that a factor would increase the cost to Nantahala should not keep it from being used.

In a previous opinion we held that the Commission was not required to include Alcoa's TVA purchases in the roll-in. *See Nantahala Power*, 65 N.C. App. at 212, 309 S.E. 2d at 484. The evidence in that case and in this case shows that Alcoa purchases large amounts of power from TVA in addition to the power it receives from Tapoco. This power is transmitted to Alcoa on Tapoco's lines. Whether or not Tapoco wheels this power we believe it is power purchased by Alcoa outside the unified system and the Commission was not required to consider it in setting a rate.

In finding that the NFA and 1971 Agreement resulted in concealed benefits to Tapoco and Alcoa at the expense of Nantahala, the Commission relied on evidence which it analyzed very similarly to its analysis in the previous case decided by this Court. *See Id.* at 209-10, 309 S.E. 2d at 482-83. It

found that under the Apportionment Agreement Nantahala was deprived of 66,000,000 kwh average energy production annually which went to Tapoco. It found that Nantahala had a demand generating capacity of 81,800 kw but was limited by the agreement to 54,300 kw which requires Nantahala to pay an unnecessary demand charge because of this 27,500 kw loss. It found that Nantahala received no compensation under the apportionment agreement for the value of its upstream storage capacity to Tapoco or for its relinquishment to TVA of the right to control stream flow. It also found that under the 1971 Apportionment Agreement Nantahala did not receive the benefits it should have received as being part of an integrated system. The Commission found that the NFA was unfair to Nantahala in that it was structured to meet Alcoa's need for a certain amount of stable energy and not Nantahala's need for peaking capacity.

Tapoco and Alcoa argue that in this case they have offered evidence which refutes this analysis of the evidence. They say that the conclusion that Nantahala was deprived of 66,000,000 kwh per year was based on a 1960 Ebasco study which is contradicted by more recent evidence. They also say that the evidence shows that although Nantahala's aggregated annual generation may exceed its sales, much of the energy is generated at a time when it cannot be used by Nantahala's customers. As to what the Commission found was a 27,500 kw loss of demand capacity to Nantahala they say that if this calculation is correct there is no evidence that because Nantahala received less than its generation capacity this gave a benefit to Tapoco. As a matter of fact, Tapoco received proportionately less under the agreement for its capacity than did Nantahala.

As to the upstream storage of water by Nantahala, Tapoco and Alcoa argue that the Federal Power Act does not permit upstream licensees to assess a downstream governmental plant for downstream benefits. Tapoco and Alcoa argue that the NFA was not structured to meet Alcoa's needs any more than Nantahala's needs. Nantahala received firm power under the NFA which is what it needs to serve its customers.

Tapoco and Alcoa make persuasive arguments which we might accept if our function was that of the Utilities Commission. We believe the Utilities Commission has analyzed the evidence and made findings of fact that are supported by the evidence as to the concealed benefits which flow from Nantahala to Tapoco and Alcoa under the NFA and the 1971 Apportionment Agreement.

Tapoco argues that it should be dismissed from the case. It says no order has been entered affecting it and it is not a proper party. It argues that it is incurring substantial legal fees which it should not be required to do. We believe Tapoco is a proper party to this proceeding. Nantahala and Tapoco have been held to be one utility for ratemaking purposes in this case. We hold that Tapoco should remain a party and bound by any order entered in this proceeding.

Affirmed.

Judges ARNOLD and BRASWELL concur.

APPENDIX C

Opinion of the North Carolina Utilities Commission, dated June 8, 1982

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-13, SUB 35

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

Application of Nantahala Power and Light Company for Authority to Adjust and Increase its Electric Rates and Charges

ORDER INCREASING RATES AND REQUIRING REFUND

HEARD IN:

Swain County Courthouse, Bryson City, North Carolina, on September 16, 1981, and The Commission Hearing Room, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina 27602, on February 23, 24, 25, and 26, 1982, and March 2, 3, 4, 5, 9, 10, 11, and 12, 1982

BEFORE:

Commissioner Sarah Lindsay Tate, Presiding; and Commissioners A. Hartwell Campbell and Douglas P. Leary

APPEARANCES:

For Nantahala Power and Light Company:
Robert C. Howison, Jr., James E. Tucker, and William Matthews, Hunton & Williams, Suite 400, Branch Banking and Trust Building, P.O. Box 109, Raleigh, North Carolina 27602

For Aluminum Company of America and Tapoco, Inc.:
Ronald D. Jones, David R. Poe, and Dennis P. Harkawik, LeBoeuf, Lamb, Leiby & MacRae, 140 Broadway, New York, New York 10005

For Cherokee, Graham, Jackson, and Swain counties, North Carolina; the towns of Andrews, Bryson City, Dillsboro, Robbinsville, and Sylva, North Carolina; The Tribal Council of the Eastern Band of Cherokee Indians; and Henry J. Truett:
William T. Crisp and Robert B. Schwentker, Crisp, Davis, Schwentker and Page, P.O. Box 751, Raleigh, North Carolina 27602

For the Using and Consuming Public:
Richard L. Griffin, Assistant Attorney General, P.O. Box 629, Raleigh, North Carolina 27602

Thomas K. Austin and Karen Long, Staff Attorneys, Public Staff—North Carolina Utilities Commission, P.O. Box 991, Raleigh, North Carolina 27602

BY THE PANEL: On December 31, 1980 Nantahala Power and Light Company (Applicant, the Company, or Nantahala) filed an application with the Commission seeking to increase its rates and charges for retail electric service in North Carolina effective February 1, 1981. The proposed increase in rates and charges was designed to produce approximately $2,147,853 of additional revenues for Nantahala's North Carolina retail operations based upon the test year level of operations. On January 18, 1981, the Commission issued an Order designating this proceeding to be a general rate case, pursuant to G.S.

62-137, and suspending Nantahala's application for a period of 270 days, pursuant to G.S. 62-134.

On January 16, 1981, the Public Staff and the Attorney General moved to dismiss the application, or, in the subordinate alternative, to defer hearing the case and to join Nantahala's parent company, Aluminum Company of America (Alcoa), and Nantahala's affiliate, Tapoco, Inc. (Tapoco), as parties to the proceeding. The Public Staff and the Attorney General argued that Nantahala's application was deficient in that it did not include "roll-in" data which, in the view of the moving parties, was required by the Supreme Court's decision in *State ex. rel. Utilities Commission* v. *Edmisten*, 299 N.C. 432 (1980). Answers were filed by Nantahala, Alcoa, and Tapoco on February 6, 1981. On March 13, 1981, the Commission issued an Order entitled "Ruling on Motions and Scheduling Hearings," in which it denied the motions to dismiss or join additional parties but ordered Nantahala to submit data and testimony in this docket on the issue of utilizing a rolled-in cost of service treating Nantahala and Tapoco as a single system for rate-making purposes. In that Order, the Commission stated:

> "Upon analysis of the Supreme Court's decision, the current status of Docket No. E-13, Subs 29 and 35, and the contentions of the parties, the Commission concludes that a roll-in determination is required in Docket No. E-13, Sub 35 independently and irrespective of whether such a determination is required in Docket No. E-13, Sub 29. Because the test period in Docket No. E-13, Sub 29 was for the year ending December 31, 1975, and the test period in the current case is for the year ending December 31, 1979, and because Docket No. E-13, Sub 29 involves a rate base determined on fair value, and the current case involves a rate base to be determined on original cost, the Commission believes the factual and legal framework of the two cases is such that a roll-in determination in the remanded case is not necessarily dispositive of whether a roll-in determination is required in the current case. Whether a roll-in is beneficial is a question of fact that

may vary as the facts of each case change, and thus it would not appear that a finding in the remand case will necessarily determine that outcome in the new case. Accordingly, the Commission concludes that Nantahala's application is defective for failure to include roll-in data, and that if the Commission were to proceed to hearing in this case without requiring Nantahala to file roll-in information, it would be violating the Supreme Court's mandate which controls both the remanded case and the new case."

On March 23, 1981, all of the Intervenors in this docket at that time filed their Motion to Reconsider the Joinder of Alcoa and Tapoco as Parties and Exceptions to Rulings on Motions and Scheduled Hearings.

On April 10, 1981, the Public Staff filed a Renewal of Motion to Dismiss, Alternative Motion to Continue Hearing and Extend the Time to File Testimony.

On April 13, 1981, Exceptions were filed by Nantahala to Portions of Rulings on Motions and Scheduled Hearings.

On April 14, 1981, Nantahala filed its Response to Renewal of Motion to Dismiss; Alternative Motion to Continue Hearing and Extend the Time to File Testimony.

On April 29, 1981, the Commission issued an Order Rescheduling Hearings to Begin on September 15, and Extending Time for Filing Testimony and Giving Notice.

On May 19, 1981, the Commission issued an Order changing the hearing dates to begin in Bryson City on Wednesday, September 16, 1981, for the purpose of receiving testimony from public witnesses. The hearing was held in Bryson City as scheduled and public witnesses were heard.

On July 13, 1981, the Commission issued an Order referring the hearing in this docket to this panel of Commissioners.

On July 16, 1981, the Commission issued an Order Joining Alcoa and Tapoco as Parties to these proceedings. Also on July 16, 1981, Nantahala filed a notice of undertaking pursuant to G.S. 62-135 of suspended rates. Nantahala also filed a

Petition to Delay the Effective Date of Commission Order of March 13, 1981, Tolling or Suspending of Time Periods.

On July 21, 1981, an Errata Order was issued to show the correct date for the hearings to begin. On July 22, 1981, Response of Intervenors to the Notice and Petition filed by Nantahala on July 16, 1981, was filed and motion was made to require Tapoco and Alcoa to join in Nantahala's undertaking as signatory parties or guarantors.

On July 28, 1981, Order Allowing Rates to be Collected Pursuant to G.S. 62-135 was issued by the Commission.

On July 31, 1981, Petition to Intervene was filed by Derol Crisp and allowed by Commission Order of August 12, 1981.

On July 31, 1981, and on August 3, 1981, Errata Orders were issued by the Commission to correct several errors in the Order issued on July 28, 1981, allowing rates to be collected pursuant to G.S. 62-135.

On July 31, 1981, Tapoco and Alcoa filed Statements of Exceptions, Request for Reconsideration, and Request for Clarification of the Commission Order joining them as parties to this proceeding, and Order was issued on September 4, 1981, denying the Motions.

On August 12, 1981, Nantahala filed Undertaking to Refund.

Motion to Cancel or Limit Scope of Hearing was filed with the Commission on August 20, 1981, by Nantahala, and an Order Limiting Scope of Hearings of September 18, 1981, was issued by the Commission on August 31, 1981.

On September 4, 1981, Tapoco and Alcoa filed a Motion for Scheduling Additional Hearings and for Permission to File Testimony.

On September 4, 1981, Nantahala filed a Motion Regarding Membership of Hearing Panel, and Order Overruling Motion for Different Panel was issued September 15, 1981.

On September 8, 1981, Nantahala filed a Motion for Continuance of hearing in this proceeding. By Order of September 15, 1981, Nantahala's Motion for Continuance of the hearings scheduled to begin September 22, 1981, save that being held on

September 16, 1981, in Bryson City, was allowed and continuance granted to February 23, 1982. The Order further extended the 270-day period for a period of 154 days upon Nantahala's waiver of its right to object to such extension.

On September 9, 1981, Intervenors to this proceeding filed Response to Nantahala's Motion to Challenge the Panel.

On September 11, 1981, Intervenors filed Response to (1) Tapoco's and Alcoa's Motion to Bifurcate Hearings and (2) Nantahala's Motion for Continuance which had been filed on September 2, 1981. By Order of September 16, 1981, the Motion by Alcoa and Tapoco to bifurcate the hearings into two phases was denied.

On September 18, 1981, Petitions to Intervene were filed by the town of Bryson City and the county of Swain and allowed by Commission Order of October 5, 1981.

On September 23, 1981, Nantahala filed Exceptions to the Order Overruling Motion for Different Panel.

On October 5, 1981, Exceptions were filed by Tapoco and Alcoa to the Order Overruling Motion for Different Panel.

On December 17, 1981, the Commission issued its Order Fixing Time for Alcoa and Tapoco to File Testimony on or before January 22, 1982.

On December 18, 1981, Alcoa and Tapoco filed Motion for Clarification; Motion to Suspend Schedule; Reservation of Federal Rights, and a Supplement to said Motions was filed on December 22, 1981. Intervenors filed their Response to said Motion on January 4, 1982. By Order issued on January 21, 1982, the Commission denied the Motion for Clarification except as set out therein; denied the Respondent's Motion for Continuance and ordered that the Panel take judicial notice of the Commission Orders in Docket No. E-13, Sub 29, including the September 2, 1981, Order and the Final Order when issued.

On January 6, 1982, Nantahala filed Reservations of Federal Rights.

On January 7, 1982, Alcoa and Tapoco filed Motion to Compel Response to Data Request, to which Intervenors filed their response on January 20, 1982.

On January 22, 1982, Tapoco filed Motion to Dismiss, Alternative Motion for a Bill of Particulars, and Statement on Nonfiling to which Intervenors filed their Response on January 29, 1982. On February 8, 1982, Order was issued by the Commission denying Motion to Dismiss and Motion for Bill of Particulars.

On January 29, 1982, Alcoa filed Statement of Position and Reservation of Rights.

On February 11, 1982, the Intervenors filed a Motion to Strike the Testimony and Exhibits of witnesses Little and Toof.

On February 19, 1982, the Complainants in Docket No. E-13, Sub 36, filed for leave to withdraw their complaint against Nantahala, Alcoa, and Tapoco. This Complaint had been filed with the Commission on January 16, 1981, and had been consolidated for hearing with Docket No. E-13, Sub 35, by Order issued on September 4, 1981. Defendants had twice moved for dismissal of this action. On February 22, 1982, an Order allowing withdrawal of the complaint was issued. On February 24, 1982, this Order was modified to the extent that the complaint was dismissed with prejudice.

The proceeding first came on for hearing in Bryson City, North Carolina, on September 16, 1981, at which time the following public witnesses testified in support of the Intervenors: Virginia Gribble, Marie Leatherwood, Charles S. Slagle, Derol Crisp (an Intervenor), Frank Young, Barbara Eberly, Alfred Lindsey, Eugene McMonigle, Pauline Styles, Ray Wright, Robert Fouts, Tom Underwood, Jeanne Shannon, Spencer Clark, Victor E. Shannon, Howard Patton, Harold L. Gershenoff, Elizabeth Dewees, Veronica Nicholas, Vance Fouts, James Coggins, Nell R. Rogers, Edward J. Skelley, Ruth Littlejohn, William G. Davis, Gladys Griffin, Helen Kirkland, Lucy Riley, Emaline Cucumber, Stacy Saunooke, Fred W. Bumgarner, Mary Alice Greer, Karl Nicholas, Sue Cypher, H. P. Browning, Helen Jacobs, Rose Greer, Katy Brady, James B. Childress, Ramona Eddy, Gene Stamey, Ted Farmer, Carrol E. White, Dale Nations, and Mary Lou Byrd. Witnesses Crisp, Wright, Leatherwood, and V. Nicholas identi-

fied several exhibits some of which were admitted into evidence. Witness Veronica Nicholas, a County Commissioner of Jackson County, testified again in Raleigh at the renewal of the proceedings and again identified exhibits which were admitted into evidence.

The resumed proceedings came on for hearing as scheduled on February 23, 1982. Previously, on January 22, 1982, Tapoco had filed a motion to dismiss wherein, in the alternative, Tapoco said that if the motion were not granted, Tapoco would not file testimony in the proceeding. On February 8, 1982, an Order issued which denied Tapoco's motion. Tapoco did not prefile testimony and upon the coming on of the case for hearing, counsel for Alcoa announced that Tapoco would not participate in the hearing. However, during the course of the hearing, counsel for Alcoa announced that he was also appearing in behalf of Tapoco for certain purposes and made motions in behalf of Tapoco.

On the afternoon of February 23 and continuing through February 24-26, March 2-5, and March 9-12, 1982, the Commission held hearings as to which witnesses listed below testified (due to scheduling problems witnesses did not testify in the order listed below). The subject of their testimonies is summarized as follows:

For Nantahala: (1) N. Edward Tucker, Jr., Vice President of Rates and Research of Nantahala, an electrical engineer who testified as to certain adjustments to the 1979 book revenue and expenses, the 1979 book and the proposed rate of return, the proposed Purchased Power Adjustment, the methodology used for allocating revenues, expenses and rate base, the results of allocation studies, and the design of the proposed retail rate schedules; (2) William M. Jontz, President of Nantahala, an electrical engineer, who testified as to Nantahala's service areas, the customer growth in usage of electrical energy increase in original cost of electric plant in service since the last rate increase, the increase in operation and maintenance expenses, the need for rate increase, and Nantahala's ability to obtain debt financing and additional capital; (3) Stuart G.

McDaniel, Senior Vice President of Associated Utility Service, Inc., who testified as to rate base, operating revenues and expenses, overall rate of return on present and proposed rates for Nantahala as a stand alone company, and on a rolled-in basis with Tapoco, Inc.; (4) Herbert J. Vander Veen, a principal in the Washington Utility Group of Ernst & Whinney, who testified as to a rolled-in cost of service for a single unified Nantahala-Tapoco public utility system which would supply the full electrical requirements for the Alcoa smelting and fabricating load in eastern Tennessee and the public load in the five-county service area in western North Carolina and the reasons why he did not think any type of roll-in was appropriate; and (5) Joseph F. Brennan, President of Associated Utility Services, Inc., who testified as to the fair rate of return which Nantahala should be afforded an opportunity to earn on its rates for retail electric service in North Carolina.

For the several intervenors: (1) Curtis Toms, Jr., Supervisor Accounting Division—Communications Section, Public Staff, who testified as to the revenues, expenses, and investment of Nantahala, of Nantahala on a total company rolled-in basis, of Tapoco on a total company rolled-in basis, and of Nantahala and Tapoco on a rolled-in basis as if the two companies were one entity; (2) Dr. Robert Weiss, economist in the Economic Research Division of the Public Staff, who testified as to a proper overall fair rate of return for Nantahala to earn on its North Carolina retail operations and a proper capital structure with regard to common equity, long-term debt, and preferred stock; (3) David A. Springs, head of the power supply planning and power systems planning section of Southern Engineering Company of Georgia, who testified as to his review and analysis of materials filed in the proceeding and in other proceedings, including various contrasts between and among Nantahala, Tapoco, Alcoa, and TVA, as to a recommendation for appropriate capacity and energy allocation factors under a rolled-in allocation of cost responsibility of the Nantahala-Tapoco system, as to a recommendation for separation of utility costs and revenues from nonutility costs and revenues,

and in opposition to some of the testimony of witnesses for Nantahala, Tapoco, or Alcoa; and (4) J. Bertram Solomon, electric rate consultant with Southern Engineering Company of Georgia, who testified as to the results of the Intervenor's combined Nantahala-Tapoco allocation cost-of-service study.

For Nantahala: Joseph F. Brennan, who had previously testified, testified in opposition to the capital structure of Dr. Weiss which had included preferred stock.

For Alcoa: (1) John C. Romano, Utilities Engineer, Electric Division, Public Staff, who identified his prefiled testimony and exhibits which had been withdrawn prior to commencement of the hearing; (2) Bruce Barstow, Vice President for Public Relations and Advertising of Alcoa, who testified as to Alcoa's position with regard to its wholly owned subsidiary, Nantahala; (3) George J. Myers, Power Manager of Alcoa's Tennessee operations and President of Tapoco, who testified as to Tapoco's physical plant and operations and to the scope of regulation of federal agencies having jurisdiction over Tapoco; (4) Dr. David I. Toof, manager in the Washington Utility Group of Ernst & Whinney, who testified as to the concerns expressed by the North Carolina Utilities Commission that Nantahala's relationship with Alcoa has had an adverse impact on Nantahala's ratepayers, including how a revenue requirement model was defined and developed, based on specific assumptions which were used to produce alternative scenarios involving Nantahala's operations; (5) John M. Little, partner in Ernst & Whinney and member of the Washington Utility Group, who testified as to the Supreme Court's concern that Nantahala's relationship with Alcoa has had an adverse impact on Nantahala's ratepayers and explained the results of studies conducted by himself and Dr. Toof which analyzed the impact that Alcoa has had on Nantahala and its ratepayers from 1940 to 1980; (6) Dr. William J. Leininger, employee of Ernst & Whinney and co-director of the Washington Utility Group, who testified as to how Nantahala's New Fontana Agreement entitlements fit its load, to show the rate advantage to Nantahala's customers compared to other retail rates in North

Carolina and Tennessee and to show that Alcoa's total power cost is greater than the total power cost to Nantahala where total power cost equals the sum of the generation plus purchased power; (7) B. S. Cockrell, employed by Alcoa as Operating Manager-Power, who testified as to the development of Alcoa's Tennessee operations and as to Nantahala's and Tapoco's, and as to why, in his opinion, Tapoco came out second best in the New Fontana arrangements and that Alcoa is subsidizing Nantahala's ratepayers; and (8) Herbert J. Vander Veen, who had previously testified, testified in opposition for applying a roll-in methodology for ratemaking and in rebuttal to the testimony of Intervenor witness Springs.

For Nantahala: (1) Herbert J. Edwards, Jr., Senior Vice President, Ebasco Business Consulting Company, who testified in rebuttal to Intervenor's witnesses Springs' and Soloman's allocation methodology; (2) Jeff M. Makholm, a Staff Econometrician employed by Associated Utility Services, Inc., who testified in rebuttal to Intervenor's witness Weiss' statistical analysis and to review his analysis and conclusions concerning the relationship between common equity ratio and total capitalization for electric utilities; and (3) N. Edward Tucker, who had previously testified, testified as to Nantahala's operations under the Fontana, New Fontana, and 1971 Apportionment Agreements and in opposition to Intervenor witness Springs' allocation methodology.

In addition to the testimony of the witnesses, virtually every witness sponsored one or more supporting exhibits.

Upon the close of testimony by witnesses for the Intervenors, Tapoco made an appearance in the case. Alcoa and Tapoco moved for dismissal of that portion of the case relating to the roll-in methodology. The motion was disallowed.

Following the close of the hearings, the parties were requested to file briefs and proposed Findings of Fact and Conclusions of Law within 30 days of filing of the last transcript of testimony. The parties did file briefs and proposed orders in apt time.

Upon consideration of the testimony and exhibits presented at the hearing and the entire record in this docket, the Commission makes the following

FINDINGS OF FACT

1. Nantahala is a duly organized public utility company under the laws of North Carolina, subject to the jurisdiction of this Commission, and is holding a franchise to furnish electric power in the western part of the state of North Carolina under rates and service regulated by this Commission as provided in Chapter 62 of the General Statutes.

2. Tapoco is a duly organized public utility and is domesticated as such under the laws of North Carolina. It is subject to the jurisdiction of this Commission with respect to its retail rates and electric service as provided in Chapter 62 of the General Statutes.

3. Both Nantahala and Tapoco are wholly owned subsidiaries of Alcoa. Alcoa is a public utility pursuant to G.S. 62-3(23)c and is subject to the jurisdiction of this Commission with respect to retail ratemaking.

4. The Nantahala and Tapoco electric facilities constitute a single, integrated electric system and are operated as such by, and as a coordinated part of, the Tennessee Valley Authority (TVA) system.

5. For purposes of setting the Applicant's rates in this proceeding, the Nantahala and Tapoco systems should be treated as one entity with respect to all matters affecting the determination of the Applicant's reasonable cost of service applicable to its North Carolina retail operations.

6. The New Fontana Agreement (NFA), executed by TVA, Alcoa, Nantahala, and Tapoco, and the resultant 1971 Apportionment Agreement between Tapoco and Nantahala have resulted in substantial benefits to Alcoa to the significant detriment of the customers of Nantahala.

7. The methodology employed by the Intervenors in making cost-of-service allocations is the most appropriate for use in this proceeding. Consequently, each finding of fact appearing in this Order which deals with the proper level of rate base, revenues, and expenses has been determined based upon said methodology.

8. Nantahala-Tapoco's original cost of electric plant is $21,955,280, consisting of electric plant in service of $50,161,648; construction work in progress of $371,262; reduced by the accumulated provision for depreciation of $25,539,709; accumulated deferred income taxes of $2,973,551; and accumulated deferred investment tax credit (pre-1971) of $64,370.

9. The reasonable allowance for working capital is $1,035,212, consisting of cash working capital of $625,057, materials and supplies of $497,389, FERC license expense of $48,076, unamortized maintenance of $56,607, less customer deposits of $191,917.

10. Nantahala-Tapoco's original allocated cost rate base is $22,990,492. This amount consists of net original cost of electric plant of $21,955,280, plus a reasonable allowance for working capital of $1,035,212.

11. The approximate gross revenues from electric operations for the test year, after accounting and pro forma adjustments, under rates approved by Commission Order of June 14, 1977, are $17,882,589 and after giving effect to the Company proposed increase is $20,030,442 ($17,882,589 + $2,147,853).

12. The approximate level of test year operating expenses under rates approved by Commission Order of June 14, 1977, after accounting and pro forma adjustments, including taxes and interest on customer deposits, is $13,976,104 which includes an amount of $1,547,242 for actual investment currently consumed through reasonable actual depreciation after annualization to year-end levels.

13. The reasonable capital structure to be employed as a basis for setting rates in this proceeding is composed as follows:

Debt	49.3%
Equity	50.7%
Total	100.0%

14. The proper cost for debt and preferred stock is 8.46%. The reasonable rate of return Nantahala should be allowed to earn on common equity is 16.5%. Using a weighted average for the cost of debt and common equity, with reference to the reasonable capital structure heretofore determined, yields an overall fair rate of return of 12.54% to be applied to the Company's original cost rate base. Such rate of return will enable Nantahala, by sound management, to produce a fair return for its shareholder, to maintain its facilities and service in accordance with the reasonable requirements of its customers, and to compete in the market for capital funds on terms which are reasonable and fair to the customers and to its existing investor.

15. The approximate annual level of revenues which Nantahala should be authorized to collect through rates charged for its sales of service, based upon the findings of fact set forth hereinabove, is $15,735,791.

16. The rates and charges of Nantahala, based upon the adjusted test year level of operations, under rates approved by Commission Order of June 14, 1977, are excessive to the extent that said rates produce a level of revenue which is $2,146,798 ($17,882,589 - $15,735,791) greater than the Applicant's revenue requirement (cost of service). Thus, Nantahala should be required to reduce said rates and charges in a manner so as to achieve an annual gross revenue reduction of approximately $2,146,798, based upon the adjusted test year level of operations.

17. Nantahala should be required to refund to its North Carolina retail customers all revenue collected since September

3, 1981, under the rates approved by Commission Order issued June 14, 1977, and proposed rates put into effect August 1, 1981, to the extent that said rates produced revenue in excess of the rates approved herein. Said refund shall include revenues collected under the Company's base rate structure as well as through operation of the Purchased Power Adjustment Formula plus interest computed and compounded at the legal annual rate.

18. The Applicant should base all residential customer's billings on monthly meter readings.

19. The Applicant's Purchased Power Adjustment Clause should be formulated so as to permit the Applicant to recover from its North Carolina retail customers 26.56% of the total demand-related purchased power costs and 26.06% of the total energy-ralated purchased power costs attributable to Nantahala/Tapoco in the future. Applicant should also refund recoveries it has made from its North Carolina retail customers via its Purchased Power Adjustment Clause to the extent such recoveries exceeded 26.56% of the total demand-related purchased power cost and 26.06% of the total energy-related purchased power cost attributable to Nantahala/Tapoco during the test period. The Applicant should also list the Purchased Power Adjustment as a separate item on each billing.

20. Alcoa has so dominated certain transactions and agreements affecting its wholly owned subsidiary Nantahala that Nantahala has been left but an empty shell, unable to act in its own self interest, let alone in the interest of its public utility customers in North Carolina. Therefore, this Commission is compelled to find that, to the extent Nantahala is financially unable to make the revenue refunds required in this Order, Alcoa shall refund all or any portion of the aforementioned revenue refunds that Nantahala is financially unable to make.

21. Nantahala's proposed rate design and service rules are reasonable and appropriate as modified herein.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 1

The evidence for this finding is contained in the verified application and in the record as a whole. This finding is essentially procedural and jurisdictional in nature and is not contested.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 2 AND 3

The Commission Order of October 3, 1980, in this docket declared Tapoco and Alcoa to be public utilities in North Carolina and subject to the jurisdiction of the Commission. That Order, with its findings and conclusions and discussion of the evidence in support thereof, is attached hereto as Exhibit A and is incorporated into this Order by reference. The Commission concludes that Tapoco is a public utility and is subject to the jurisdiction of this Commission with respect to its retail rates and electric service. The Commission also concludes that Alcoa is a public utility pursuant to G.S. 62-3(23)c and is subject to the jurisdiction of this Commission with respect to retail ratemaking.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 4 AND 5

In its opinion, *Utilities Commission* v. *Edmisten, Attorney General*, 299 NC 432, the Supreme Court stated, at page 435.

> "The transmission facilities of Nantahala and Tapoco are integrated and interconnected into a single system . . ."

And at pages 442 and 443, the Supreme Court further concluded that the Nantahala-Tapoco electrical system is a single system:

> "In light of the foregoing, we cannot agree with the Commission that the evidence is insufficient to warrant the treatment of Nantahala and Tapoco as a single system for rate making purposes. The 'roll-in' device, or technique, for rate making computation seems especially

appropriate in a case such as this where one physically integrated system interconnected in such a way that all power available to the system can be used to enhance its overall reliability and supply its requirements as a whole, is presided over by two corporate entities (See, e.g., *Central Kansas Power Co.* v. *State Corporation Commission*, 221 Kan. 505, 561 P. 2d 779 (1977)). This is especially true when both corporate entities are wholly owned by a parent corporation which benefits from the power generated by the system. This device does nothing more than recognize that the two corporate entities ought, for rate making accounting purposes, be treated as the one electrical power producing and distribution system which, in fact, they are. If the then unlawful preferences are indeed accorded to Alcoa to the detriment of Nantahala's customers because of the separate corporate structures and the intercorporate apportionment agreements, this ratemaking device would seem to eliminate them. . ."

These conclusions by the Supreme Court based on evidence adduced in Docket No. E-13, Sub 29, that Nantahala and Tapoco constitute a single, integrated electric system and should be treated as one system for rate-making purposes, have been carefully considered by the Commission in light of the evidence presented in this docket. Notwithstanding the assertions of witnesses for the respondents that the Court's decision was based on the "misconception" that Nantahala and Tapoco are a single, unified system, the evidence presented in this proceeding strongly reinforces the Supreme Court's determination in this regard. The evidence is overwhelming and undisputed that Nantahala and Tapoco are both wholly owned by one corporate parent, Alcoa. The facilities of Nantahala and Tapoco are located in contiguous areas in western North Carolina. The Nantahala and Tapoco electric facilities are physically interconnected with each other, and both companies are interconnected with TVA; power can be dispatched and transmitted from the facilities of one to the facilities of the other. The original Fontana and the New Fontana Agreements

treat the facilities of Nantahala and Tapoco without discrimination and make them an integrated part of, and subject them to coordination by, the TVA system. By the terms of these agreements TVA receives the output of all of the hydro resources of both Nantahala and Tapoco, except for three small projects of Nantahala. By terms of these agreements Tapoco and Nantahala also turn over to TVA control of production stream flow. Accordingly, TVA determines for Tapoco and Nantahala, as a single entity, both electric generation and stream flow and operates them as a coordinated system as a part of TVA's own system. In turn, Tapoco and Nantahala jointly receive back from TVA certain entitlements of power which they divide between themselves by the 1971 Nantahala-Tapoco Apportionment Agreement.

Intervenors' witness Springs testified that it is a "false and arbitrary assumption that NP&L and Tapoco operate as isolated systems when in fact they do not." (Tr. Vol. 14, p. 28) When witness Springs was asked whether the Nantahala and Tapoco facilities should each be operated as a separate and independent system, he replied: "No, by coordinating them as one system with TVA, the outputs of the generating resources are maximized." (Tr. Vol. 14, p. 41) Witness Springs also testified that, from an engineering standpoint, the Nantahala and Tapoco facilities should be operated as one utility.

The Commission concludes that the Nantahala and Tapoco electric facilities constitute a single, integrated electric system and are operated as such by, and as a coordinated part of, the TVA system.

The Commission also concludes that, for purposes of setting Nantahala's rates in this proceeding, the Nantahala and Tapoco systems should be treated as one entity with respect to all matters affecting the determination of Nantahala's reasonable cost of service applicable to its North Carolina retail operations. Elsewhere in this Order the Commission has made findings and conclusions determining that a roll-in of Tapoco together with Nantahala for rate-making purposes will result in a significant reduction in the cost of providing public utility

electric service to the customers of the combined Nantahala-Tapoco system. The Commission incorporates those findings and conclusions herein.

Finally, the roll-in calculations adopted herein accord no preference to either the North Carolina public load or to the Alcoa load in Tennessee. The rate base, revenues, and expenses of Tapoco and Nantahala are rolled together for cost allocation purposes of the unified public utility system and not to create a preference for either Alcoa or Nantahala as to energy production or the New Fontana Agreement entitlement. The roll-in is a method of cost allocation and not a technique for assigning preferences for energy use.

It is unnecessary, at this juncture, for the Commission to decide the possible future issue of whether or not Alcoa, as the public load grows, will be entitled to a lesser share of the energy output of the combined Nantahala-Tapoco system. It is currently sufficient that the Commission apply the roll-in to the facts in this record. By virtue of that methodology, a lesser quantum of higher cost Nantahala energy has been averaged with a higher quantum of lower cost Tapoco energy. As a result, the average cost of roll-in energy is lower than the cost of Nantahala-only energy, and the Nantahala customers are entitled to the benefits of this lower cost.

Evidence and Conclusions For Findings of Fact Nos. 6 and 7

The Commission, as previously discussed, has determined for purposes of this proceeding that the Nantahala and Tapoco systems should be treated as one entity. The Commission must now determine the proper allocation methodology to be used in apportioning the combined revenues, expenses, and investment of the Nantahala-Tapoco system between that applicable to said system's North Carolina retail operations and that applicable to said system's operations over which this Commission has no jurisdiction.

Generally speaking, the allocation methodology that Nantahala and Alcoa would have the Commission adopt for use

herein is based in all material respects upon demand and energy entitlements as described and set forth in the 1962 New Fontana Agreement and the 1971 Tapoco-Nantahala Apportionment Agreement. The Commission will first address the impropriety of basing cost allocations on demand and energy entitlements as contained in the 1962 New Fontana Agreement and the 1971 Tapoco-Nantahala Apportionment Agreement as proposed by Nantahala and Alcoa.

There are a number of inequities to Nantahala that arise out of both the New Fontana Agreement (NFA) and the 1971 Tapoco-Nantahala Apportionment Agreement (Apportionment Agreement) that result in Alcoa's receiving concealed benefits. Because the inequities of the NFA are more subtle and difficult to express than are those of the Apportionment Agreement, the 1971 Apportionment Agreement will be discussed first.

A. *Concealed Benefits of the 1971 Apportionment Agreement*

(1) Quantity of Nantahala's Energy Generation

According to the 1960 Ebasco Study, Nantahala's annual primary energy generation was 360,000,000 kWh and the average annual energy generation for the period 1924-1959 was 439,000,000 kWh; generation for the test year was 593,986,000 kWh. The Ebasco study showed:

> "(a) The primary energy capability under the most adverse water conditions of record. This quantity was found to be 360 million kilowatt hours per year.
>
> "(b) The average energy that could be generated annually by these hydroelectric plants. This quantity was found to be 439 million kilowatt hours per year."

The difference of 79,000,000 kWh between the primary energy capability and the average annual energy is considered as interruptible energy. When the three small Nantahala plants not included in the NFA return entitlement from TVA are

deducted, annual average energy reduces to 426,000,000 kWh and the 79,000,000 kWh interruptible energy is reduced to 66,000,000 kWh. By the same token, primary energy capability under the most adverse water conditions is reduced to 351,800,000 kWh.

Based upon these established and known facts, in 1963, after the NFA was executed, Alcoa entered into a written agreement with Nantahala wherein Nantahala was apportioned a certain share of the NFA return entitlements. This agreement apportioned to Nantahala 360,000,000 kWh minimum production plus actual production in excess of 360,000,000 kWh; that is, an average of 426,000,000 kWh annually (360,000,000 kWh + 66,000,000 kWh), using this language:

> "2. Nantahala should be entitled each month to an amount of energy which when added to its generation at plants not operated under the above mentioned agreement of December 27, 1962, shall be the equivalent either to its total actual generation during that month or to the one-twelfth of its annual primary generating capability whichever shall be the greater. The annual primary generating capability of Nantahala as used in the foregoing sentence is agreed to be 360 million kilowatt hours."

By this agreement, Nantahala received annually the average of 426,000,000 kWh, of which 360,000,000 kWh was guaranteed as a minimum.

Despite these facts, when Mr. Popovich, an Alcoa employee, devised the 1971 Apportionment Agreement, he credited Nantahala with only 360,000.000 kWh annually which he defined as 351,276,000 kWh primary (40.1 MW × 8,760 hrs. in a year) plus fuel replacement of 8,760,000 kWh (1 MW × 8,760 hrs.) which he defined as dump energy. In comparison to the 1963 Apportionment Agreement with Alcoa, Nantahala was deprived of 66,000,000 kWh average energy production annually. The detriment to Nantahala constitutes a benefit to Tapoco that is passed on to Alcoa.

(2) Size of Nantahala's Dependable Generating Capacity

As one aspect of the 1971 Apportionment Agreement, Nantahala has a limitation placed upon its dependable generating capacity of 54,300 kW with the result that any month it has to provide a customer demand in excess of 54,300 kW, it must pay a monthly demand charge to TVA for all demand over that limitation. If the limitation were at Nantahala's actual dependable generating capacity of 81,800 kW, a monthly demand charge would be saved for 27,500 kW; i.e., the difference between 81,800 kW and 54,300 kW (when customer demand equalled or exceeded the 81,800 kW level).

Demand charges imposed on Nantahala for use of capacity between its assigned capacity of 54,300 kW and its actual dependable capacity of 81,800 kW would represent an expense to Nantahala and, thus, a savings to its New Fontana Agreement sister Tapoco, since the capacity constraints for the TVA return entitlements are jointly shared by them under the New Fontana Agreement. Tapoco's savings are passed on to Alcoa so as to become Alcoa savings; i.e., a concealed benefit to Alcoa.

The record clearly and convincingly establishes that Nantahala's correct capacity is in fact 81,800 kW and that, by being assigned a demand limitation of only 54,300 kW, Nantahala suffers significant monthly financial loss.

The 1960 Ebasco Study, undertaken for Nantahala by independent experts, computed Nantahala's dependable generating capacity, under the most adverse water conditions, at 85,400 kW. After deducting the three small plants excluded from the NFA, that capacity is 84,300 kW. The Ebasco Study computation is confirmed in an old memorandum of W. T. Walker, Nantahala's president, wherein he notes that in 1965 another independent source had analyzed Nantahala's *allowed capacity* under the original Fontana Agreement to be only 35,172 kW. Not only was this allowed capacity under the original Fontana Agreement regarded as unrealistic, but a capacity much higher than 54,300 kW was thought to be proper. The Walker memorandum states:

". . . He thought his allocated capacity to be unreasonable for a company with 84.3 Mw of co-ordinated capacity under adverse water conditions, so he allocated 74.9 Mw to Nantahala . . ."

The Walker memorandum continues on the same page by even noting that "George Popovich's proposed allocation to Nantahala . . ." for capacity would be 75,000 kW.

Based upon these established facts, after the NFA was executed, Alcoa entered a written agreement with Nantahala in the year 1963 wherein Nantahala was allowed to use capacity without limitation. This agreement, mentioned in the previous section, thereby permitted Nantahala to use actual capacity to the limits assigned by the 1960 Ebasco Study.

Intervenors' witness Springs testified that after adjustment for reserves, the allowable capacity of 84,300 kW, under most adverse water conditions, should be 81,800 kW.

Despite these impressive studies and facts, when witness Popovich accomplished his study for the 1971 Apportionment Agreement, while accepting the most adverse water capacity factor of 84,300 kW, he deducted 27,500 kW for the "largest unit out" to reach an assigned capacity of 54,300 kW. This deduction is for the Nantahala facility which forms upwards of 50% of the entire Nantahala generation system of 11 dams.

If Nantahala were a separate and independent system, a deduction of the "largest unit out" might be appropriate to determine assured capacity. However, Nantahala is not and never has been a separate electric system—it was not so designed. Nantahala's two largest facilities are Thorpe (previously Glenville), completed in 1941 with 21,600 kW capacity, and Nantahala, completed in 1942 with 43,200 kW capacity. The Thorpe and Nantahala facilities comprise about 65% of Nantahala's entire system. At the time of their construction, Alcoa obtained a certificate of necessity from the War Department and *expressly argued and avowed that they were part of the Alcoa system.* In Intervenors Ex. DAS-7, at pp. 5-6 of 11, it is recorded that Alcoa said of these two Nantahala plants:

> "At the present time, Alcoa receives power from three dams located on tributary waters of the Tennessee River at Calderwood, Tennessee and Tapoco, North Carolina, (Cheoah and Santeetlah developments) . . .
>
> "To improve the present power situation and to supply a portion of the 200,000 additional kW required for national defense purposes, *applicant proposes to build two new developments*, also on tributaries of the Tennessee River, at Glenville and Nantahala, North Carolina . . . *The estimated total addition to the Alcoa power system* is 51,500 Kw, part of which will be produced at the new developments and part from additional water released for us downstream." (emphasis added). (Apparently, the two new projects were finally designed for their actual greater combined capacity, 64,800 kW.)

Furthermore, for the past 40 years, both Nantahala and Tapoco have been operated as an integral part of the TVA electric system pursuant to the provisions of the Fontana and New Fontana Agreements. Moreover, when Alcoa negotiated these agreements with TVA, it did not bargain for return power from TVA as if Nantahala was an independent power system but rather the attributes of the Alcoa system were melded together with the TVA system for evaluation purposes. In this regard, offered as evidence is a memorandum of Alcoa's meetings with TVA respecting negotiations for the NFA wherein the TVA proposals were based on integration into and coordination with the TVA system.

With Nantahala and Tapoco being thus integrated into and coordinated with the TVA system, it is not appropriate to determine Nantahala's actual dependable generating capacity by configuring Nantahala as a single independent and isolated system and to use the "largest unit out" methodology. Instead, Nantahala should be treated as part of the TVA system and the reserve margin used by TVA should be applied. TVA does not use a reserve of "largest unit out" but rather uses "the loss of load probability method." Due to the favorable operating

characteristics being, for instance, low operating speeds, ruggedly constructed equipment, and restarting capability without auxiliary power, the reserve requirements of a hydro system are very low. Intervenors' Ex. DAS-17, being a portion of the 1980 contract of the Southern Company Services Intercompany Interchange, at page 6 of 6, shows that a 3% hydro reserve is proper.

Using a 3% reserve in place of the "largest unit out" reserve, in this case upwards of 50%, would establish a capacity under most adverse water conditions of 81,800 kW as opposed to the 1971 Apportionment Agreements calculation of 54,300 kW. This is what Intervenors' witness Springs testified the calculation should be.

Significant cost is shifted to Nantahala by the unfair and unwarranted limitation of its dependable generating capacity to 54,300 kW. Conversely, that expense, in the form of demand charges paid to TVA, is a concealed benefit to Alcoa.

3. Nantahala's Upstream Storage Benefits to Tapoco

Nantahala's projects are upstream of Tapoco's projects, except Santeetlah. As a consequence, water that is stored by Nantahala can be released to flow downstream and be used by Tapoco for production of electricity. Therefore, Nantahala's storage has a value to Tapoco. It is granted that TVA's Fontana project now lies between the Nantahala and Tapoco projects. However, that does not diminish the value of Nantahala's stored water to Tapoco since, when Nantahala releases water, that water, or its equivalent, can be released by Fontana so as to flow through to Tapoco.

On January 10, 1941, before Fontana was constructed and even before the Fontana Agreement, Nantahala applied to the War Department for a certificate to build the Glenville (now Thorpe) and Nantahala projects, noting that they should be upstream of the Calderwood and Cheoah dams. That application, in part, makes this statement about the upstream benefits:

> ". . . It is contemplated that they will store water during the winter months, and will be used in the dry season to produce additional power and also to make available additional water for the developments downstream . . ."

A 1956 study estimated the upstream storage benefits of the two major Nantahala projects to Tapoco's downstream facilities. As shown by Intervenors' Ex. DAS-9, the Nantahala and Thorpe projects yield a *continuous* relative contribution to Tapoco's Calderwood and Cheoah projects of 4.3 MW (sum of 1.5 MW and .8 MW for Calderwood and 1.3 MW and .7 MW for Cheoah). This is the equivalent of 37,668,000 kWh annually as Nantahala's upstream storage benefit to Tapoco (4,300 × 8,760 hours).

Despite the presence of Nantahala's upstream storage benefits to Tapoco, when witness Popovich devised the 1971 Apportionment Agreement, Nantahala received no credit for this benefit. Of course, the benefit accrued to Tapoco who passed the concealed benefit on to Alcoa.

4. TVA's Right to Control Nantahala's Properties

By the 1941 Fontana Agreement, Nantahala, at the instance of Alcoa, gave to TVA the right to control the storage and flow of water from its several hydroelectric projects. Respecting the value of this right, the Fontana Agreement, at page 3, in part, states:

> "Whereas, the most efficient and economical operation of the hydroelectric plants on the Tennessee River and the Little Tennessee River and their tributaries requires the closely coordinated operation of the system of Authority (sic, TVA) with Company's (sic, Nantahala & Tapoco) plants, and such coordinated operation will make possible substantial benefits and economies; and
> "Whereas, operation under the provisions of this agreement will aid in the control of floods, the promotion of navigation, and the conservation of stored water; and . . ."

Unquestionably, Nantahala's giving up of rights constituted a loss of considerable value for which loss Nantahala has been entitled to compensation. Under the terms of the New Fontana Agreement, the right to control the storage and flow of water for Nantahala's facilities was again passed to TVA.

With the 1963 Apportionment Agreement between Alcoa and Nantahala, Alcoa agreed to continue to pay to Nantahala monies for Nantahala's loss of those operational rights. Moreover, the agreement clearly stated that TVA was continuing to pay value for those rights, which value is reflected in the TVA return entitlement of the New Fontana Agreement. The 1963 Alcoa-Nantahala Apportionment Agreement at pages 1-2, in part, states:

> "Whereas, the agreement dated August 14, 1941, known as the 'Fontana Agreement' has been superseded in certain respects by a new agreement dated December 27, 1962; and
>
> "Whereas, heretofore Nantahala has received certain payments which represented payments to Nantahala from operating its properties in accordance with the terms of the Fontana Agreement; and
>
> "Whereas, the above-mentioned agreement of December 17, 1962, (sic, NFA) was entered with the understanding among Nantahala, Alcoa and Tapoco, Inc. (a) that the benefits accruing to Nantahala thereunder would include the right to continue to receive payments equal in amount to the above-mentioned payments . . ."
>
> * * * * * *
>
> "*Now, therefore*, it is agreed that during the term of the above-mentioned agreement of December 27, 1962:
>
> "1. Alcoa shall pay Nantahala in monthly installments the sum of $89,200 per annum which amount shall be in addition to the amounts otherwise paid by Alcoa to Nantahala for energy under such power purchase contract as shall be in effect from time to time."

In the year 1963, in Docket No. E-13, Sub 13, to which the Commission takes judicial notice, the North Carolina Utilities Commission found the following facts concerning the TVA return entitlement as including a reimbursement to Nantahala. At page 8, the Commission stated:

> ". . . The Evidence offered by Nantahala further disclosed that Nantahala operates under a working agreement between its parent, Alcoa, and TVA (the Fontana Agreement), wherein TVA exercises control of water release in the Nantahala generating system. For this privilege, TVA delivers to Alcoa approximately 25,600,000 kWh at 100 percent load factor (compensation power) for the credit of Nantahala . . ."

At page 10, the Commission further stated:

> "7. Alcoa pays Nantahala for TVA's control of the release of water in Nantahala's generating system at the rate of 3.5 mills per KWh, based on 25,600,000 KWh annually. This payment is below the rate paid by Alcoa to Nantahala for firm power."

Despite the fact that the NFA includes in the TVA return entitlement a reimbursement by TVA for the right to operate Nantahala's projects for which Alcoa previously paid $89,200 annually to Nantahala, when witness Popovich devised the 1971 Apportionment Agreement, he gave no credit to Nantahala for that entitlement.

Under the terms of the 1971 Apportionment Agreement, Nantahala receives neither an energy credit or a monetary payment for the right given up. Naturally since the TVA payment for the operational rights, which is paid with energy in the NFA rate entitlement, did not got to Nantahala, it inured to the benefit of Tapoco. In turn, Tapoco passes this concealed benefit to Alcoa. (It should be noted at 3.5 mills has, for many years, constituted far less than the present value of electric energy).

5. Nantahala's Upstream Storage Benefits to TVA

Another failure of the 1971 Apportionment Agreement respecting Nantahala's participation is that the Popovich formula does not consider the proper value to Nantahala of the fact that the Nantahala, Tapoco, and TVA systems are interconnected. Interconnection is of considerable value to TVA completely aside from the fact that Nantahala's rate base includes in it certain assets devoted to the interconnection, which assets are entitled to earn a rate of return. Because Nantahala is not an isolated system, it should be receiving the usual benefits that accrue from coordinated operation. Yet, Nantahala does not receive the usual benefits of an interconnected and coordinated system.

Intervenors' Ex. DAS-23 consists of many pages of Alcoa memoranda reflecting the path of negotiation between Alcoa and TVA for the New Fontana Agreement. While there are several references to the matter of interconnection, the Commission refers only to a few which illustrate that interconnection has considerable value. At page 28 of 85, one memorandum says:

> ". . . Copies of our studies were given to TVA and they showed that the new TVA proposal could be supplied from our present system without any apparent consideration given to gains that TVA will realize from integration and the peaking capacity on our system.
>
> "As mentioned above, TVA will check our studies on their own computer and if these studies are confirmed, we will have immediate discussions in an effort to determine what studies should be made to properly determine the benefits of integration, use of our peaking, etc. . . ."

Again, on page 30 of 85, Intervenors' Ex. DAS-23, an Alcoa memorandum states:

> "II. *We do not believe present TVA proposal equitable because*:
>
> "a. Our system will alone produce the TVA proposal . . . We argued, however, that TVA could realize advantages of

> integration, peaking, etc., and still provide their proposal to us from our system."

Again, on page 34 of 85 of Intervenors' Ex. DAS-23, another Alcoa memorandum states:

> "There is a strong feeling among the Engineering Department, particularly Messers Gnuse, Tompkins, Eagleton, Popovich and others, that the value to TVA of integrated operation is much greater in 1960 than it was in 1941 at the time the contract was negotiated. They have argued that because of this, TVA should be willing to renegotiate the entire Fontana Agreement recognizing the present inequities . . ."

Of course, during further negotiations, Alcoa was able to derive considerable gain from TVA for the integrated systems factor. The Commission has previously mentioned certain benefits of a coordinated, integrated operation, such as the need for smaller reserves and, in this case, that TVA actually controls production of generation and storage waters.

However, the Commission has not yet mentioned the benefit to TVA of Nantahala's projects that are upstream of TVA's Fontana Project. In an integrated system such benefit is maximized. Since the Fontana Project is located below Nantahala's projects and above the Tapoco projects, other than Santeetlah, the Fontana Project receives the benefit of the storage capability of the Nantahala projects. Indeed, the TVA Tennessee River system receives the benefit of the storage of all of these projects located on the Little Tennessee River system. This is especially true since, under the New Fontana Agreement, TVA has control of all these reservoirs on the Little Tennessee River system, except the three small projects of Nantahala which are not included. Intervenors' Ex. DAS-9 shows the results of a study of downstream storage benefits. According to this study, the Nantahala and Thorpe units alone added 12,400 kW of continuous primary power to the TVA system. This is equal to 108,624,000 kWh per year (12,400 x 8,760 hours). The Commission has already considered that the

upstream Nantahala and Thorpe projects yield a continuous relative contribution to Tapoco's Calderwood and Cheoah projects of 4,300 kW, which is 37,668,000 kWh annually. This benefit to Tapoco should be deducted from Nantahala's total upstream storage benefit of 108,624,000 kWh in order to obtain Nantahala's upstream storage benefit to TVA. After deduction, Nantahala's annual upstream storage benefit to TVA is calculated to be 70,956,000 kWh.

Examination of the NFA reveals that the parties cancelled out their respective upstream storage benefits when that bargain was struck. Since Nantahala provided benefits downstream to both TVA and Tapoco, and TVA provided benefits downstream to Tapoco, it was Tapoco which gained by that mutual cancellation. Certainly, Nantahala lost the benefit of the value of 70,956,000 kWh annually. Surely, Nantahala should receive in a joint agreement with TVA the benefit of that integrated upstream storage.

When the 1971 Apportionment Agreement was entered into between Tapoco and Nantahala, Tapoco should have been willing for Nantahala to have an additional 70,956,000 kWh annually assigned to it as the value of integrated storage, but when Mr. Popovich devised the apportionment formula Nantahala got no such benefit. As a consequence, to Tapoco's benefit, Nantahala was deprived of one value of the interconnection with the TVA system. This concealed benefit flowing from Nantahala to Tapoco is, of course, passed on by Tapoco to Alcoa.

6. Summary of Detriments to Nantahala from the 1971 Apportionment Agreement

By the 1971 Apportionment Agreement, Nantahala was given no credit for the following:

1. Average production in excess of primary production (as compared to the 1963 Alcoa-Nantahala Apportionment Agreement)	66,000 kWh annually

2. Upstream storage benefits to Tapoco	37,668,000 kWh annually
3. TVA rights to operate Nantahala properties	25,600,000 kWh annually
4. Upstream storage benefits to TVA	70,956,000 kWh annually
	200,224,000 kWh annually

In addition, Nantahala received no credit for its dependable generating capacity of 27,500 kW over the 54,300 kW assigned to it, for which Nantahala must pay demand charges to TVA when monthly demand exceeds assigned capacity.

The North Carolina Supreme Court, in *Utilities Commission* v. *Edmisten*, *supra*, at pages 440-441, when considering just the failure of Nantahala to receive benefit for its average production, stated:

> ". . . Suffice it to say that the assertion that Nantahala's public is fairly served by a contract requiring Nantahala to purchase additional power regardless of the adequacy of its own generation *assaults the common sense of this Court* . . ." (emphasis added).

Now that considerably more of the various detriments to Nantahala have been exposed and fleshed out, it is apparent that the 1971 Apportionment Agreement works an extensive injustice on Nantahala and its public ratepayers, the gravity of which far exceeds even that envisioned by the Supreme Court.

B. *Concealed Benefits of the 1962 New Fontana Agreement*

(1) NFA Entitlements Structured to Meet Alcoa Load

The concealed benefits flowing from Nantahala to Alcoa by virtue of the New Fontana Agreement are entirely different from those previously discussed which flow from the 1971 Tapoco-Nantahala Apportionment Agreement. The basic inequity to Nantahala arising out of the NFA is that the energy entitlement returned to Nantahala and Tapoco from TVA is

structured to meet Alcoa's steady demand for a certain amount of electricity for purposes of aluminum production rather than the more variable demand for a public service load. Consequently, the NFA returns an average of 218,300 kW demand at a high load factor with minimal peaking deviation, which load factor is principally designed to service Alcoa's pot-lines and other production electrical requirements. Even the interruptible and curtailable energy entitlement returned to Tapoco-Nantahala is in increments of wattage that conform to the demands of a pot-line so that, if power is interrupted or curtailed, Alcoa can respond by cutting out a particular pot-line.

Nantahala, on the other hand, has a fluctuating demand for energy which has peaks and valleys. This is typical of a public service load. Nantahala's electrical requirement is for assured, but constantly, variable amounts. Nantahala needs peaking capacity and its generation projects possess peaking capacity; yet the NFA traded away that peaking capacity to TVA. The Intervenors contend that it would be ridiculous, as a result of enlightened, arm's-length bargaining, to turn over Nantahala's peaking capacity to TVA and then, at such time as its service load requires peaking capacity, to buy that same capacity back from TVA at a very high price. The Commission agrees that the detriment resulting to Nantahala from the design of the NFA flows to Alcoa as a benefit.

Intervenors' witness Springs testified as to the details of Alcoa's concealed benefits derived under the NFA. He showed that Alcoa reaped benefits through the improvement of the availability of Tapoco's secondary energy production to an *average curtailment* rate of only 8%.

He also showed that the Tapoco generation statistics reflect coordination with the Fontana Project and other forms of integration with TVA. Certainly the mode of operation is inconsistent with the isolated system model utilized as the basis for the 1971 Apportionment Study. As stated in a memorandum by George Popovich contemporaneously with the negotiation of the NFA:

> "It is my opinion that, to Alcoa, the present proposal (sic, NFA) represents an improvement over the existing Fontana Agreement. In dry years this improvement could be substantial . . ."

Alcoa was in direct control of the negotiations and, unlike the Nantahala ratepayers, has had every ability to protect its own interest during the negotiations. Alcoa cannot now be heard to claim that it is dissatisfied with the NFA..

(2) NFA Entitlements Not Intended to Meet Public Load

One reason the NFA may have been designed so exclusively to meet Alcoa's needs, to Nantahala's detriment, was that when the NFA negotiations were underway, the parties contemplated the sale of Nantahala's distribution system to Duke power Company. By the sale to Duke, Nantahala would have been left with its generation but would have been without a public service load. Nantahala would then have taken its NFA entitlement and delivered it all to Alcoa. Accordingly, the power Nantahala would have gotten under the NFA would have been satisfactory for delivery to Alcoa irrespective of quantity and design.

A sale of Nantahala's distribution system to Duke has been approved by the North Carolina Utilities Commission, and the approval Order, in turn, had been approved by the Superior Court. It was not until the year 1963 that the Supreme Court stopped the sale, which date was after the New Fontana Agreement had been executed. See *Utilities Commission* v. *Membership Corp.*, 260 N.C. 59, 131 SE 2d 865 (1963). Prior to the Supreme Court's action, Alcoa personnel had believed that the sale to Duke was to be approved. Thus, in an Alcoa memorandum dated May 27, 1960, it is recorded:

> ". . . They (sic TVA) asked us the status of the sale of Nantahala To Duke. We told them that the matter was at a standstill at the present time but we were continuing our efforts to complete the transaction and we expected that the sale would take place perhaps within the next year . . ."

In a memorandum of August 23, 1960, it is stated:

> "One final note, the entire TVA proposal is based upon the sale of the Nantahala Power Company. TVA proposed that if the sale was not complete at the time this new proposed contract becomes effective, they would increase the power available to us under the purchase contract to whatever amount is necessary for us to handle the Nantahala peak. This would be done on a temporary basis and would be reduced concurrent with the transfer of the Nantahala properties to Duke."

In another memorandum of November 6, 1962, which is the final memorandum after completion of all negotiations for the NFA, the following is written:

> ". . . In my opinion it will be preferable for us to sell the Mission Plant to TVA whenever we transfer the Nantahala properties to Duke . . ."

These memoranda clearly establish that during the entire 2 1/2 year period over which the NFA was negotiated between TVA and Alcoa, both parties contemplated that Nantahala's entire public service load would be sold to Duke. Based on this assumption, the entire TVA return entitlement to Alcoa was structured in such a manner as to meet Alcoa's load requirements for aluminum production. In no manner was the NFA structured to meet Nantahala's needs. The Commission supports this obvious conclusion even further by noting that on January 1, 1963, five days after the signing of the NFA, Alcoa and Nantahala executed an agreement between themselves to reflect "understandings" made between the affiliated companies at the time of the signing of the NFA. In this agreement, it was stated:

> "Whereas, the above-mentioned agreement of December 27, 1962, was entered into with the understanding among Nantahala, Alcoa and Tapoco, Inc. (a) that the benefits accruing to Nantahala thereunder would include the right to continue to receive payments equal in amount to the

above-mentioned payments and, in addition, the right each month to an amount of energy which, together with its generation at plants not under said agreement, would be equivalent to its total actual generation but in no event less than one-twelfth of its annual primary generating capability, and (b) that certain obligations and benefits thereunder would be performed and enjoyed as herein set forth . . ."

The significance of this latter agreement is that since the NFA was obviously structured to Alcoa's need rather than to Nantahala's, Alcoa and Nantahala agreed that Nantahala could obtain certain power entitlements from the TVA return and, additionally, receive other monetary benefits from Alcoa. Also, Intervenors' expert witness Springs testified, in part, as follows:

"Throughout the negotiations, TVA and Alcoa had every reason to assume that NP&L's distribution would soon be sold off to Duke Power Company. NP&L did not even have a representative at any of the negotiating sessions. Alcoa secured the benefits of being integrated with TVA, including the benefit of storage releases from Fontana which are *vital to the operating of Tapoco's facilities* . . . The 1963 Apportionment Contract shows in its face that the New Fontana Agreement was never intended as a 20-year power supply for NP&L public load. It appears that NP&L's officers and consultants were primarily concerned with the effect of the Agreement on the ongoing rate case and transfer cases before the NCUC and not with the interest of NP&L ratepayers over the 20-year period of Agreement." (emphasis added).

(3) Summary of Inequities to Nantahala from the NFA

To summarize the foregoing inequities to Nantahala which result from the New Fontana Agreement, it can be stated that the TVA return entitlement was entirely designed to meet Alcoa's aluminum production needs and was not suitable for

Nantahala's public service needs. Nantahala needed peaking capacity and had peaking capacity from its own generating stations, yet Nantahala gave up that capacity with the result that it must buy high cost power from TVA to meet its peaking responsibilities. The extra costs thus incurred by Nantahala inure to the benefit of Alcoa. For instance, by the 1963 Alcoa-Nantahala Apportionment Agreement, even Alcoa recognized, in fact, the unfairness to Nantahala produced by the NFA and agreed to pay an annual cash settlement of $89,200, to Nantahala to offset some of the inequities.

C. *Dominance of Alcoa over Nantahala and Tapoco*

The Commission notes that while Nantahala's facilities were obligated as provided under the Original Fontana Agreement, it was not even permitted to be a signatory thereto. Even though it was signatory to the New Fontana Agreement, it did not participate in the negotiations of that agreement. Moreover, Nantahala's employment contract with its president, William M. Jontz, in effect from 1976 to 1981, provides, in pertinent part:

> "2. *Section 2. Duties and Responsibilities.* Employee is hereby employed by Nantahala as Chief Executive Officer of Nantahala and shall act in such capacities pursuant to the supervision and direction of the Board of Directors of Nantahala (hereinafter sometimes referred to as the 'Board'). Major general objectives of such employment during the term hereof are for the Employee to:
>
> > "(a) Manage Nantahala as a public electric utility, within the restraints of regulatory controls, so as to achieve a profitability consistent with other public electric utilities in North Carolina.
> >
> > "(b) Develop plans for the possible sale or other disposition of Nantahala and execute such plans should the Board of Directors of Nantahala so direct.
> >
> > "(c) Accomplish (a) and (b) above so that there is little or no adverse impact on the operations and

assets of Nantahala's parent company, Aluminum Company of America, and its subsidiaries in North Carolina, including, but not limited to, the generation and transmission of electric power by Tapoco, Inc. and Yadkin, Inc. and the operations of the Badin Works of Aluminum Company of America."

* * * * * *

"*Section 3. Compensation.* For the performance on his duties and responsibilities, Employee shall receive the following compensation:

"(1) *Base Salary.* . . . (NOTE: this subparagraph is not further here quoted, but it provided for probable annual achievement awards.)

"(b) *Achievement Award.* To be determined annually by the three-member Aluminum Company of America group among the Board of Directors of Nantahala and to be based on the performance of Employee in reference to the major general objectives set forth in Section 2 hereof. The probable annual achievement awards for the respective contract years are set forth above.

* * * * * *

"*Section 6. Nondisclosure.* . . . Nor shall Employee in any manner, directly or indirectly, aid or be a party to any act, the effect of which would tend to divert, diminish or prejudice the good will or business of Nantahala or of Nantahala's parent company, Aluminum Company of America and its subsidiaries in North Carolina, Tapoco, Inc. and Yadkin, Inc."

Alcoa's dominance over Nantahala is obviously and frequently documented in the results of various arrangements it has caused Nantahala and Tapoco to enter into. Such dominance has caused detriment to Nantahala and has resulted in the passing of concealed benefits to Alcoa. Other indications of dominance of Nantahala by Alcoa are that its facilities are

integrated and interconnected into Tapoco's so as to form a single system; the majority of Nantahala's Directors are employees of Alcoa; an Alcoa Vice President has the proxy for selecting the board membership; under the President's new employment contract he receives incentive awards at the instance of a committee of directors, which committee would include only Alcoa employees since the other directors are subordinate to the president and would be excluded; the decision to negotiate alone with TVA for a new agreement to replace the expiring New Fontana Agreement was forced upon Nantahala by the Alcoa-Tapoco decision to exclude Nantahala's interest from its negotiations with TVA; and Alcoa controls accounting policies.

Alcoa's dominance over Tapoco is more blatant than its dominance over Nantahala. Tapoco's headquarters are at Alcoa, Tennessee; its president is a salaried employee of Alcoa serving Alcoa as its Alcoa, Tennessee, power supply manager; its vice presidents are Alcoa employees; it serves only its owner; it sells all of its NFA entitlements to Alcoa for a nominal 4 1/2% profit; each corporate director is an Alcoa employee; Alcoa provides all Tapoco financing; and Alcoa controls the ultimate operation and accounting policies even to the extent of physically keeping Tapoco's financial records and books at Alcoa's Pittsburg headquarters.

Based upon the foregoing and upon careful consideration of the entire evidence of record, the Commission concludes that it should reject the Companies' proposed cost allocation methodology in that said methodology in all material respects is based upon the 1962 New Fontana Agreement and the 1971 Tapoco-Nantahala Apportionment Agreement.

Before going forward with a specific discussion of the Intervenors' allocation methodology, it is appropriate to examine two questions which were vigorously contended as between Alcoa and Tapoco on the one hand and the Intervenors on the other hand. First, does Nantahala-Tapoco wheel power for Alcoa? And second, are Alcoa's separate purchases of power directly from TVA part of the capacity requirements of the Nantahala-Tapoco integrated system?

D. *Does Nantahala-Tapoco Wheel Power for Alcoa?*

During the test year Alcoa purchased directly from TVA 2,140,410,000 kWh, an average demand of approximately 245 MW, for its Tennessee operations at a cost of $52,155,136, which it claims should be considered as a part of the capacity requirements of the Nantahala-Tapoco single, unified public utility system. Alcoa and Nantahala contend that 245 MW of power should become part of the capacity requirements of the Nantahala-Tapoco system because the power was allegedly wheeled by Tapoco from TVA to Alcoa. The Intervenors dispute this contention on the grounds that there is no wheeling in fact and, if so, that the 245 MW of power is not integrated with the other power carried by the Nantahala-Tapoco unified public utility system.

Wheeling has a particular definition. In *Town of Norwood* v. *FERC*, (1978), the Court defined "wheeling" as an industry term which denotes the use of one utility's transmission facilities to transmit from another utility. In *Idaho Power* v. *FPC*, (1965), the Court defined "wheeling" as the transmission of one company's power over another company's system.

Alcoa-Nantahala witness Vander Veen identified a letter contract between Alcoa and Tapoco as the FERC schedule which governs the alleged wheeling arrangement. However, that letter contract does not mention either "wheeling" or "transmission" to support the Companies' position. Instead, the contract states:

> "At the substation facilities mentioned above, Tapoco will perform such necessary transformation and switching of power delivered to Alcoa as Alcoa shall direct."

Under the New Fontana Agreement, TVA maintains and operates the substation in question for which Alcoa pays TVA. Article V, section 6, provides:

> "In consideration for the provision, operation, and maintenance by TVA of the Alcoa Switching Station and related facilities, Company will pay TVA a monthly facilities rental of $2,500.

Moreover, by the terms of the New Fontana Agreement, TVA can use the Company's transmission facilities for furnishing power to others including the Company. Article III, section 2(c), in part, provides:

> ". . . Company and TVA may from time to time mutually agree for TVA to use Company's transmission facilities for the transmission to others of power generated at Company's plants and other power which TVA may wish to transmit."

When viewing the FERC Rate Schedule in light of these provisions of the New Fontana Agreement, it seems clear that Tapoco's contact with the Alcoa purchases from TVA is minimal; i.e., transferring and switching, and does not rise to a usual wheeling transaction. This view is greatly emphasized when considering that Alcoa is an industrial customer of TVA for an amount of power that is twice as great as is Tapoco's NFA entitlement.

Moreover, Tapoco is completely out of the financial arrangements between TVA and Alcoa as to the purchased power. Tapoco does not even reflect these Alcoa purchases from TVA on its FERC Form 1. And, too, Tapoco sells all of its power; i.e., its NFA return entitlement from TVA, to Alcoa.

The record reflects that during the test year 1979, Alcoa bought $52,155,136 in electric power directly from TVA, which Alcoa used solely for its industrial plant operations in Tennessee. The record establishes without dispute that neither Nantahala nor Tapoco generated, bought, sold, acquired, or had any right to use that electricity. Alcoa retained 100% control over such power at all times. Where Nantahala and Tapoco, as public utilities, do not generate, acquire, buy, sell, or have the right to control the use of electric power, no such ungenerated, unacquired, unbought, unsold, and uncontrolled power should be a part of the capacity requirements of the Nantahala-Tapoco public utility system.

Additionally, Tapoco failed to report on its Form 1 to FERC that it wheeled $52 million of power to Alcoa. One reason for this failure is that TVA bills Alcoa directly for the power.

Tapoco does not become involved with the purchased power, either financially or through line losses.

E. *Are Alcoa's Separate Purchases of Power Directly from TVA Part of the capacity requirements of the Nantahala-Tapoco Integrated System?*

Assuming *arguendo* the Companies' contentions regarding wheeling are correct, there is no showing that the power is at all integrated with the combined system. The further issue is whether the separate power purchased by Alcoa directly from TVA has become available to the Nantahala-Tapoco system to meet its public service load. If Tapoco had any contact at all with the separate Alcoa power purchases directly from TVA, at most the Tapoco activities are limited to Transforming and Switching, which activities do not rise to the level of transmission as required for wheeling. However, if it is assumed, again for purposes of argument, that Tapoco did wheel the separate Alcoa power purchased directly from TVA, such power should not be treated as a part of the Nantahala-Tapoco unified system power because the power never entered into the Nantahala-Tapoco unified system. Even though the TVA power enters Tapoco's substation at Alcoa, Tennessee, such power does not traverse the Nantahala-Tapoco electrical system. Instead, at most, that power is released by TVA at the Alcoa substation where it is transformed and immediately switched over to the Alcoa service lines. Such power could never be available to serve any portion of the public service load. Most fundamentally, its identity as Alcoa power is never lost since Alcoa never releases control of the use of that power in its capacity as ultimate consumer of that power from TVA.

Therefore, based upon the foregoing and other evidence of record, the Commission concludes that it would be completely erroneous to find either (1) that the Alcoa purchases from TVA are wheeled by Tapoco to Alcoa or (2) that such power, if wheeled, enters into and becomes a part of the capacity requirements of the Nantahala-Tapoco unified public utility system.

Allocation of the costs of the Nantahala-Tapoco unified system involves several aspects; namely, (a) allocation of the $52 million of separate Alcoa purchases directly from TVA and (b) allocation of the Nantahala-Tapoco integrated system. The Commission will treat these two items separately.

F. *Allocation of the Separate $52 Million of Alcoa Purchases Directly From TVA*

The Intervenors contend, and the Commission concurs, that should the separate $52 million of Alcoa purchases directly from TVA be rolled into the total power purchases of the Nantahala-Tapoco unified system, those purchases should be allocated entirely to Alcoa.

To illustrate the necessity of the allocation entirely to Alcoa, let us suppose that Tapoco purchased the power in question under a contract identical to the Alcoa-TVA contract. In such an instance there is no way in which that contract can be turned from a specific requirements contract into a general requirements contract. Alcoa purchased a continuous supply of 245,000 kW which constitutes 2,146,200,000 kWh annually. This continuous stream of power is upwards of four times larger that Nantahala's needs and larger than Nantahala's and Tapoco's combined NFA entitlements plus Nantahala's purchases from TVA.

Such a large quantity of continuous power is not suitable for a public utility load which needs variable amounts of energy, but rather is suitable only for a specific customer having stable needs. Thus, even if the contract were considered to be a Tapoco contract, the contract is so tailored to a specific customer that the costs associated with it would have to be specifically assigned to the customer.

In this case, in order to escape a specific or pass-through assignment of costs of the TVA purchases to Alcoa, the contract would have to be modified to be a Tapoco purchase contract with modified terms providing for power amenable to the public utility operation. Neither of those facts has or will happen. For purposes of this case, the Companies are bound to

the existing contract to which Tapoco is not a party and which is an Alcoa specific requirement rather than a general requirements contract.

Alcoa is not a small industrial company which would have only a marginal effect on Nantahala but rather a massive company with worldwide operations. The Alcoa, Tennessee, aluminum reduction facilities, as late as 1952, when the book *An American Enterprise* was written, were the largest in the world. Furthermore, the Alcoa, Tennessee, aluminum reduction plant is merely one of many for Alcoa.

Alcoa is a gigantic energy-consuming entity nationwide and its impact on western North Carolina is likewise enormous. If the Alcoa, Tennessee, load that is purchased directly from TVA were to be assigned as a function of the Nantahala-Tapoco system, the impact of that load on the system would be so enormous as to warp and twist the costing technique of the entire system. Indeed, if the Nantahala-Tapoco system tried independently to service the Alcoa-Tennessee load, it would have to double the size of its system. Yet no effort has been made by the Nantahala-Tapoco system to do that. Neither Nantahala nor Tapoco has built a generating facility in over 20 years. Alcoa is entirely dependent upon TVA for its supplemental load.

G. *Allocation of the Nantahala-Tapoco Integrated System*

(1) Allocation Proposed by the Companies

Although the Commission has previously rejected the Companies' use of demand and energy entitlements contained in the 1962 NFA and the 1971 Apportionment Agreement as a basis for the derivation of demand and energy cost allocations, the Commission believes that the manner in which the Companies employed the data contained in said agreements is worthy of further comment.

The NFA return entitlement from TVA is an annual average of 218,300 kW of which Nantahala is assigned 41,300 kW leaving the balance, less line losses, for Tapoco. While 90 MW

of the entitlement is curtailable for as long as five months annually, total energy curtailed is limited to 1,260,000,000 kWh during the entire 20-year term of the agreement. Of course, if power is curtailed in one year it will have to be made up in the other years in order for TVA to supply an annual average of 218,300 kW over the 20-year term. Despite this, for allocation of demand costs to Tapoco when computing the system peak, Company witness Vander Veen did not include any portion of the 90 MW curtailment entitlement for determining the peak demand upon the system. Witness Vander Veen testified:

> ". . . Consequently, for demand cost allocation purposes, I used only firm power available to meet system peak, thus removing the amount of capacity that can be curtailed and interrupted from the capacity available to serve system peak load . . ."

The upshot of this technique is to render the 90 MW valueless for meeting the system demand at any time, even during years when there is no curtailment and, indeed, when there may be additional makeup demand.

Witness Vander Veen also took out of the Tapoco demand allocation 1/6th (i.e., 15 MW) of the 90 MW interruptible power returned by TVA under the NFA. A total of 105 MW was thus taken out of Tapoco's demand allocation for both the curtailable and the interruptible power.

The effect on Nantahala of witness Vander Veen's technique would be to dramatically increase Nantahala's proportionate share of the demand charges. A careful analysis of witness Vander Veen's allocation calculation shows the following: His system peak is 465.2 MW, as to which there is improperly included 245 MW representing Alcoa's TVA purchases. If 245 MW were deducted from the system peak of 465.2 MW, a Nantahala-Tapoco system peak of 220.2 MW is obtained, of which witness Vander Veen calculates Nantahala's share to be 132.2 MW while Tapoco's share is only 88 MW. Thus Nantahala would receive a considerably higher demand allocation than Tapoco even though Tapoco takes three times as much power as Nantahala under the NFA.

Witness Vander Veen arrived at his allocations based upon the premise that the NFA and the 1971 Apportionment Agreement were negotiated in the best interest of Nantahala's public service load. Nothing could be further from the truth.

The NFA was structured to meet Alcoa's load requirements. Nantahala was not even present during negotiations. In essence, the NFA is a trade-off of certain firm power and secondary power which is available less than 50% of the time, for lesser amounts of firm and secondary power that are curtailable and interruptible but available more than 50% of the time, since any power available more than 50% of the time is usable by Alcoa in its aluminum smeltering operations. The tradeoff result is a considerable improvement in the value of Tapoco's energy usable for Alcoa's aluminum production. The tradeoff has no value to the public load. Alcoa (Tapoco) should, therefore, take full cost responsibility for the demand-related costs associated with the capacity traded off.

The Vander Veen demand allocation technique would result in a gross inequity to Nantahala and to public load customers. A proper allocation technique should not be inequitable either to Nantahala or to Tapoco. With the terms of the NFA having been structured to meet Alcoa's industrial needs and not Nantahala's public service needs, it is improper to allocate demand and energy costs based upon the TVA return entitlements.

The Intervenors have not established how much better Nantahala would have fared if the NFA had been negotiated for a TVA return entitlement suitable for Nantahala's public service load, nor have they attempted to do so. Such proof is unnecessary. It is too hypothetical to speculate as to what quantum and type of return entitlement Nantahala should have negotiated for and as to what TVA would have been willing to agree upon. Nantahala was not designed as, and is not in reality, a separate utility system but, rather, is part of an integrated Alcoa system with Tapoco.

Any regulatory reformation of the NFA to properly award to Nantahala its just entitlements should not be attempted at

this late state of the case, and particularly with an alternative solution available. The roll-in cost of service approach for Nantahala and Tapoco avoids the need for complete identification of inequities and is nicely suited as a proper alternative to reformation of contracts. The Supreme Court, in *Utilities Commission* v. *Edmisten, supra*, at p. 443, called for use of the roll-in in this case, if beneficial to the public, with this language:

> ". . . This device does nothing more than recognize that the two corporate entities ought, for rate making accounting purposes, be treated as the one electrical power producing and distribution system which, in fact, they are. If then unlawful preferences are indeed accorded to Alcoa to the detriment of Nantahala's customers because of the separate corporate structures and the inter-corporate apportionment agreements, this rate making device would seem to eliminate them . . . The case is remanded with directions to the Commission to obtain and consider information and data showing what Nantahala's cost-of-service to its customers would be if this method of rate making were used and whether Nantahala's customers would benefit thereby."

The combination of the NFA and the 1971 Apportionment Agreement forces Nantahala to purchase additional power irrespective of its production capacity. We reiterate what the Supreme Court said in *Utilities Commission* v. *Edmisten, supra*, at page 440:

> ". . . Suffice it to say that the assertion that Nantahala's public is fairly served by a contract requiring Nantahala to purchase additional power regardless of the adequacy of its own generation assaults the common sense of this court. Nantahala's customers should not be denied the benefit of their utility's fairly regular harvests of abundant energy."

The Commission also points out again that the purpose of the roll-in method of ratemaking is to cancel or at least to

true-up, concealed benefits. See, *Utilities Commission* v. *Edmisten, supra*, at pages 437-443.

(2) Allocation Proposed by the Intervenors

The Intervenors contend that the following data represents the capabilities and needs of the Nantahala-Tapoco unified system, and that such data is appropriate for use in the allocation of demand-related costs.

A. Dependable capacity of Nantahala generation	85.4 MW
B. Dependable capacity of Tapoco generation	302.8 MW
C. Total (A + B)	388.2 MW
D. Less reserve at 3%	11.3 MW
E. Net *firm* generation available to meet the Nantahala-Tapoco load (C - D)	376.9 MW
F. Purchase power by Nantahala from TVA	75.4 MW
G. Losses on F above (assumed 5%)	3.8 MW
H. Net *firm* power supply available to meet the System capacity requirements of Nantahala-Tapoco (E + F + G)	456.1 MW

Nantahala's peak load during the test year was 131,140 kW which figure represents its maximum need during the year. The 131,140 kW maximum demand consists of 121,152 kW N.C. retail demand plus 9,988 kW N.C. wholesale demand. Nantahala's demand responsibility for costing purposes can be calculated by dividing the total Nantahala-Tapoco system demand responsibility into Nantahala's N.C. retail demand responsibility. Thus, dividing 456,100 kW into 121,152 kW produces a Nantahala demand allocation of 26.56% of the system's demand responsibility. Using this allocation factor, 26.56% of the Nantahala-Tapoco unified system demand costs should be assigned to Nantahala's retail customers.

The Intervenors contend that the following data represent the average energy generated by the combined system including Nantahala's purchases, and that such data is appropriate for use in the allocation of energy-related costs.

A. Average energy generated by Nantahala (New Fontana Agreement Apportionment Study)	391,500 MWh
B. Average energy generated by Tapoco (New Fontana Agreement Apportionment Study)	1,373,600 MWh
C. Total average energy generated by Nantahala-Tapoco (A + B)	1,765,100 MWh
D. Nantahala's Purchase Power from TVA	178,921 MWh
E. Losses on D above (assumed 5%)	8,946 MWh
F. Net energy supply available to meet system energy requirements of Nantahala-Tapoco (C + D + E)	1,952,967 MWh

Nantahala's energy requirement during 1975 was 551,476 MWh, consisting of 508,973 MWh N.C. retail plus 42,503 MWh N.C. wholesale energy. Nantahala's energy responsibility for costing purposes can be calculated by dividing the total Nantahala-Tapoco system energy responsibility into Nantahala's N.C. retail energy responsibility. Thus, dividing 1,952,967 MWh into 508,973 MWh produces a Nantahala energy responsibility of 26.06%. Using this allocation factor, 26.06% of the Nantahala-Tapoco unified energy costs should be assigned to Nantahala's retail customers.

The demand allocation factor of 26.56% and the energy allocation factor of 26.06% were used by Intervenors' expert witness Solomon in allocating the Nantahala-Tapoco total system demand-related costs and energy-related costs to Nantahala's North Carolina retail operations.

The Commission, after having very carefully considered the entire evidence of record with respect to the assignment of

costs, including cost allocation techniques and/or methodologies, concludes that the methods and procedures employed by the Intervenors with respect hereto are reasonable and that said methods and procedures should be adopted for use herein.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 8, 9 AND 10

The Commission has previously concluded that the rolled-in methodology is appropriate for setting rates in this proceeding; therefore, in discussing the differences in rate base, revenues and expenses between the Company and the Intervenors in this and later sections of the Order, these differences will be based on the rolled-in methodology. The amounts for "Nantahala Only," (i.e., the Company's position) will be shown; however, there will be no further discussion of the differences between the parties arising solely from use of the rolled-in methodology.

The evidence for this finding of fact is found in the testimony and exhibits of Company witnesses McDaniel and Tucker, Public Staff witness Toms, and the proposed orders of the respective parties. The following chart summarizes the total Company amounts which the Company and Intervenors contend are proper levels of the original cost of Nantahala-Tapoco's electric plant to be used in this proceeding:

Item	*Nantahala Only*	*Nantahala-Tapoco*	*Public Staff and Intervenors*	*Difference*
Electric plant in service.....	$58,933,481	$111,263,599	$111,051,218	$ (212,381)
Construction work in progress	330,283	713,370	713,370	—
Materials and supplies.....	559,073	788,573	745,635	(42,938)
Cash working capital.....	440,612	945,891	914,116	(31,775)
FERC license expense.....	92,757	92,757	92,757	—
Unamortized maintenance.....			214,580	214,580

Accumulated provision for depreciation.....	(31,237,983)	(57,950,684)	(57,950,684)	—
Accumulated deferred income taxes	(4,208,177)	(4,254,380)	(11,173,974)	(6,919,594)
Accumulated deferred investment tax credit.....	(62,077)	(89,429)	(89,429)	—
Customer deposits	(191,917)	(191,917)	(191,917)	—
Net original cost of electric plant	$24,656,052	$51,317,780	$44,325,672	$(6,992,108)

As can be seen from the above chart, the Company and Public Staff agreed on the amounts for construction work in progress, FERC license expense, the accumulated provision for depreciation, accumulated deferred investment tax credits, and customer deposits. Therefore, the Commission concludes that the amounts shown for these items are reasonable and require no further discussion, except to state the N.C. Retail amounts. The N.C. Retail portion of these amounts are $371,262 for construction work in progress, $48,076 for FERC license expense, $25,539,709 for accumulated depreciation, $64,370 for accumulated investment tax credits, and $191,917 for customer deposits.

The total difference in the original cost of electric plant in service totals $6,992,108, and results from the different amounts proposed by the Company and Public Staff in regard to electric plant in service, materials and supplies, cash working capital, unamortized maintenance, and accumulated deferred income taxes.

The first item of difference concerns electric plant in service and results from Public Staff witness Toms' removal of $212,381 of land from electric plant in service. Witness Toms testified that the land should be classified as plant held for future use because the Company had not begun construction of either the 12.9 miles of transmission line, or the substation

in accordance with the Company's original plans. Under cross-examination, witness Toms agreed that in the fixing of rates, the Commission should ascertain the reasonable original cost of the public utilities property used and useful, or to be used and useful within a reasonable time after the end of the test period in accordance with G.S. 62-133(b)(1). He testified further, however, that his contention was that there were only two ways that property could be included in rate base. One, that it was electric plant in service, and two, that it was construction work in progress. Finally, witness Toms testified that he knew for a fact that the land was not being used in providing electric service and that construction was not ongoing.

After carefully considering the evidence, the Commission concludes that witness Toms' recommended adjustment to decrease electric plant in service by $212,381 is proper. Since the evidence shows that Nantahala has not begun the construction intended for the land and also that the land is not being used in providing electric service, this item should be excluded from electric plant in service, in compliance with G.S. 62-133(b)(1). Therefore, the electric plant in service amount of $111,051,218, or $50,161,648 on a N.C. Retail basis as proposed by Public Staff witness Toms, is the proper amount for use in this proceeding.

The second item of difference concerns Public Staff witness Toms' adjustment to decrease materials and suplies by $42,938. Witness Toms testified that he revised the Company's adjustment to reflect materials and supplies at replacement cost because his review of the average balance in materials and supplies maintained by the Company for the year ended 1980 and the five-month period ended May 31, 1981, disclosed that the materials and supplies balance maintained by the Company had not exceeded the end-of-period level. He testified further under cross-examination that his analysis of the average balances maintained by the Company subsequent to the test period also showed that the Company's actual end-of-period level had not been maintained.

Based upon the evidence presented, the Commission concludes that Public Staff witness Toms' adjustment to reduce

materials and supplies by $42,938 is reasonable. Since the average balance in materials and supplies actually maintained by the Company subsequent to the test year was less than the amount proposed by the Company and also less than the Company's end-of-period level, the Commission considers that amount included by witness Toms to be more than reasonable. Therefore, the Commission concludes that the proper amount of materials and supplies to be used in this proceeding is $745,635, or $497,389, on a N.C. Retail basis.

The third area of difference is the cash working capital. Since the Commission has found elsewhere that the proper amount of other operation and maintenance expense of $6,188,583 is reasonable, the Commission also concludes that the cash working capital allowance which is computed in part by taking 1/8 of operation and maintenance expense is reasonable. Therefore, the Commission concludes that the appropriate cash working capital allowance for use in this proceeding is $625,057 on an N.C. Retail basis.

The fourth item of difference is unamortized maintenance. Public Staff witness Toms added $214,580 of unamortized extraordinary maintenance, net of tax savings, to rate base. Witness Toms testified that the extraordinary maintenance was the result of maintenance and repairs on Tennessee Creek and Mission dams as required by the FERC. He further testified that the Company was charging the maintenance expense directly to operation and that he had proposed that this maintenance expense be deferred and amortized to operations over a 10-year period because the Company did not consider the maintenance to be recurring in nature and because maintenance expense in this magnitude had not been previously experienced by the Company. In regard to the tax savings, witness Toms testified that he had reduced the total unamortized amount by the tax savings that have already been realized. He testified further that the tax savings adjustment was necessary so that the ratepayer would pay a return only on the net expense incurred by the Company. In regard to the portion of the adjustment charged to expenses, witness Toms testified

that his adjustment to amortize this maintenance over a 10-year period was necessary in order to normalize the impact of this extraordinary maintenance for rate-making purposes. Finally, he testified that ratepayers should not be required to pay rates to cover extraordinary maintenance if the Company will not be incurring this level of maintenance on an annual basis.

Company witness McDaniel did not make an adjustment to either rate base or operating expenses in recognition of the extraordinary maintenance. On cross-examination Company witness McDaniel testified that he was aware of the fact that the maintenance expenditures had been made in 1979, but that he had concluded that no adjustment was necessary after reviewing his adjusted level of operation and maintenance expenses. However, during later cross-examination, witness McDaniel did accept subject to check that the actual figures for maintenance to reservoirs, dams, and waterways were $40,115 for the year 1977, $91,508 during 1978, $104,000 during 1980, and $356,000 during the test year ended December 1979.

Based upon the evidence presented by the witnesses, the Commission concludes that Public Staff witness Toms' adjustment to include unamortized maintenance expense in rate base net of tax savings in the amount of $214,580, or $56,607 on an N.C. Retail basis, to be proper. Accordingly, the Commission concludes also that witness Toms' adjustment to amortize the maintenance expense incurred at Tennessee Creek and Mission dams over a 10-year period is proper. Rates should be set to cover a normalized level of maintenance expense. The inclusion of the unamortized portion of this maintenance expense in rate base net of taxes, with the amortized portion included in operating expenses, is fair and equitable to both the Company and its ratepayers.

The fifth and final item of difference concerns accumulated deferred income taxes. Public Staff witness Toms proposed an adjustment to increase accumulated deferred income taxes in the amount of $6,919,594, relative to Tapoco, Inc. Witness Toms testified that the adjustment was necessary because of

Company witness McDaniel's $15,042,596 adjustment to the accumulated provision for depreciation. He testified further that Company witness McDaniel had restated the accumulated provision for depreciation under the assumption that Tapoco had used appropriate depreciation rates the whole time. He testified further that this had not happened and that Tapoco had used higher depreciation rates than are appropriate for rate-making purposes, and consequently, had collected from Alcoa rates to cover this higher level of depreciation expense. He also testified that the higher level of revenues was partially offset due to the Company's receipt of less revenues to cover income taxes resulting from these revenues and that the net difference between the two amounts represented cost-free capital which Tapoco had used for general corporate purposes.

Under cross-examination, Company witness McDaniel admitted that, since depreciation expense is a recoverable expense under the agreement between Alcoa and Tapoco, Alcoa had paid in through the rates to Tapoco approximately $15 million more in revenues than it would have paid had the depreciation rates been set at a lower level. He testified further that if a per books adjustment was made to reduce the depreciation reserve and to credit depreciation expense this would mean that accounting wise Alcoa would be entitled to a credit of $15 million. He testified that Tapoco only had revenues of approximately $7 million and that, if the entry were made and credit were given, Tapoco would have no operating revenues for a period of approximately two years. Thus, the only way Tapoco could operate would be for Alcoa to make contributions to its capital for a period of two years. Finally, he testified that in order to avoid that situation the end result of recording the entries was a charge to the reserve for depreciation and a credit to propriety capital.

Based upon the evidence presented by the witnesses, the Commission concludes that Public Staff witness Toms' adjustment to increase accumulated deferred income taxes by $6,919,594 is correct. Tapoco has in fact received excess revenues and they should be treated as cost-free capital. The Commission is not persuaded by the testimony of Company

witness McDaniel. Witness McDaniel has not recognized the fact that, if depreciation expense changes, tax expense must change also. Public Staff witness Toms has recognized that change. Therefore, the Commission concludes that the proper level of accumulated deferred income taxes for use in this proceeding is $11,173,974, or $2,973,551 on an N.C. Retail basis.

In summary, the Commission concludes that the proper level of investment in electric plant in service for use in this proceeding is $22,990,492 on an N.C. Retail basis, and is made up of the following:

Item	*Amount*
Electric plant in service	$50,161,648
Construction work in progress	71,262
Materials and supplies	497,389
Cash working capital	625,057
FERC license expense	48,076
Unamortized maintenance	56,607
Accumulated provision for depreciation	(25,539,709)
Accumulated deferred income taxes	(2,973,551)
Accumulated deferred investment tax credit	(64,370)
Customer deposits	(191,917)
Net original cost of electric plant	$22,990,492

Evidence and Conclusions For Findings of Fact Nos. 11 and 12

With respect to the test year level of operating revenue and operating revenue deductions, the differences between the parties arise, in all material respects, as a result of the use of different allocation techniques and as a result of Intervenor witness Solomon's having excluded certain revenue and revenue-related expense adjustments of Company witness Vander Veen from the total combined Nantahala-Tapoco system operations.

The Commission has previously adopted the allocation techniques employed by the Intervenors for use herein. The revenue and revenue-related expense adjustments of witness Vander Veen that were excluded from witness Solomon's total system cost-of-service determination relate to non-Fontana agreement power purchased from TVA to serve the Alcoa load. As a result of the methodology employed in the assignment of allocation of costs proposed by Intervenor witnesses Springs and Solomon and that adopted by the Commission, neither inclusion nor exclusion of said revenue and expense adjustments would have any effect upon the combined system's North Carolina operations.

While Intervenors' witness Solomon testified as to the revenue and expense items under the rolled-in methodology, his studies were based on a 10.71% overall rate of return. However, the Commission allows an overall rate of return of 12.54% which requires that witness Solomon's testimony, which the Commission otherwise accepts after adjustment for additional items of costs relating to contributions to the Alternative Energy Corporation and meter reading expense, be modified. The Commission concludes, based upon the entire evidence of record, that the test year level of operating revenue of $17,882,589 and operating revenue deductions including taxes and interest on customer deposits of $13,976,104 are proper for use herein.

The operating revenues of $17,882,589 under rates approved by the Commission Order of June 14, 1977, are those from N.C. Retail operations only. The adjusted test year level of operating expenses of $13,976,104 are also related solely to the combined systems N.C. Retail operations.

The Commission notes that the Intervenors' study was made based upon rates in effect at the time of the filing of the application for a rate increase rather than upon the current rates which were placed in effect August 1, 1981.

The evidence for these findings of fact are found in the testimony and exhibits of Company witnesses McDaniel and Tucker, Public Staff witnesses Toms, Springs, and Solomon,

and the proposed orders of the respective parties. The following chart summarizes the total Company gross revenues included in the parties' respective proposed orders:

	Nantahala Only	*Nantahala-Tapoco*	*Prior to Exclusion Alcoa's TVA Purchases Intervenors*
Sale of electricity ...	$18,796,963	$81,086,674	$81,086,674
Other operating revenues	171,526	1,978,185	1,978,185
Total	$18,968,489	$83,064,859	$83,064,859

As the chart shows, combined revenues for Nantahala-Tapoco are in agreement with the revenues proposed by the Intervenors on a total Company basis. Since the Commission has previously rejected the Company's Nantahala stand-alone position under Evidence and Conclusions for Findings of Fact Nos. 4 and 5, the Commission concludes that the proper level of operating revenues to be used in this proceeding is $83,064,859 on a total Company basis, or $17,882,589 on an N.C. Retail basis; summarized as follows:

Item	*Amount*
Sale of electricity	$17,712,315
Other operating revenues	170,274
Total operating revenues.....	$17,882,589

The following chart sets forth the amounts of operating revenue deductions proposed by the Company and the Public Staff and Intervenors:

Item	*Nantahala Only*	*Nantahala-Tapoco*	*Prior to Exclusion Alcoa's TVA Purchases Public Staff and Intervenors*
Purchased power	$7,289,861	$59,444,997	$59,444,997
Other operation & maintenance	6,253,134	11,858,638	11,604,438
Depreciation & amortization	1,599,361	2,532,691	2,532,691
Taxes—Other than income ...	1,611,981	3,751,710	3,744,875

Income taxes—			
State	81,503	125,496	160,270
Federal	377,934	1,291,454	1,542,058
Deferred	—	—	—
Deferred in prior years	(89,795)	(95,574)	(95,574)
Investment tax credit	223,922	279,121	279,121
Amortization of investment tax credit	(60,324)	(74,264)	264)
Total	$17,287,577	$79,114,269	$79,138,612

As the chart shows, the Company and the Public Staff were in agreement on the amounts of purchased power, depreciation and amortization, income taxes deferred in prior years, the investment tax credit, and the amortization of the investment tax credit. Therefore, the Commission concludes that these amounts are reasonable and require no further discussion, except to state the N.C. Retail portion of each of these items. The N.C. Retail portion of purchased power is $1,907,827, $1,547,242 for depreciation and amortization, $65,584 for deferred taxes in prior years, $238,031 for normalization of the investment tax credit, and $50,961 for the amortization of the investment tax credit.

The items comprising the difference of $254,200 in operating and maintenance expenses are as follows:

Item	*Amount*
Adjustment to amortize extraordinary maintenance	$(242,735)
Adjustment to remove capitalized fringe benefits	(17,286)
Adjustment to interest on customer deposits	5,821
Total	$(254,200)

The first item of difference concerns Public Staff witness Toms' adjustment to amortize $242,735 of extraordinary repairs and maintenance over a 10-year period. Since this item was previously discussed and found to be proper, no further discussion is required.

The second item of difference concerns Public Staff witness Toms' adjustment to remove $17,286 of capitalized fringe benefits from the Company's pro forma adjustments to fringe benefits allocable to other operation and maintenance expense. Witness Toms testified in his direct testimony that during 1980 the Company began capitalizing a portion of its fringe benefits and that the Company did not recognize this fact in its pro forma adjustment to fringe benefits. Under cross-examination, witness Toms testified that the Company had charged 100% of its adjustment to operating expense and that his adjustment simply recognized the fact that the Company would be capitalizing a portion of fringe benefits in the future. Under cross-examination from the Panel, witness Toms was asked questions concerning the date the Company began capitalizing fringe benefits and whether the capitalized portion of these fringe benefits should have been added to plant in service. In response witness Toms testified that the Company began capitalizing fringe benefits during 1980, subsequent to the test period, and that his pro forma adjustment simply recognized a known change in the treatment of these items. He testified further that the capitalized fringe benefits should not have been added to plant in service. On this same question under redirect examination, witness Toms agreed that capitalized fringe benefits would show up as either plant in service or construction in a future case with a test period that is past the period the Company began capitalizing these items. Under further redirect examination he also testified that his adjustment did not indicate any error by the Company, but rather an indication that the Company had changed certain accounting policy. Finally, he testified that this change in policy had absolutely no effect on plant in service at the end of the test year.

Based upon the evidence presented by the witnesses, the Commission concludes that the adjustment made by witness Toms to remove $17,286 of fringe benefits is proper. Since the Company will be capitalizing a portion of fringe benefits prospectively, the cost of service should reflect the new accounting treatment accorded this item of cost.

The third and final item of difference concerns interest on customer deposits. Public Staff witness Toms adjusted the per books amount to reflect the Commission's increase in the interest rate which utilities must pay on customer deposits. Witness Toms was not asked any questions during his cross-examination concerning this item. Therefore, the Commission concludes that the adjustment is proper. As discussed elsewhere herein the Commission has included in the test year cost of service $16,599 related to contributions to the Alternative Energy Corporation and $85,998 related to additional meter reading expense. Thus, in summary the Commission concludes that the appropriate level of other operation and maintenance expense for use herein is $6,188,583 on a N.C. Retail basis.

The next difference between the witnesses concerns taxes—other than income. This difference of $6,835 results from Public Staff witness Toms' adjustment to remove capitalized fringe benefits associated with FICA and unemployment taxes from the Company adjusted test year level of operations. Since the Commission has previously found witness Toms' adjustment to other capitalized fringe benefits to be appropriate as previously discussed, the Commission also concludes that witness Toms' adjustment to FICA and unemployment taxes is also proper. Thus, the Commission concludes that the proper level of taxes other than income for use in this proceeding is $1,520,644 on a N.C. Retail basis.

The final two components of operating revenue deduction concerns state and federal income taxes. The differences in state and federal income taxes are due entirely to the difference in components of revenue and expense utilized by witness Toms and witness McDaniel in their income tax computations. Since the Company did not question witness Toms concerning his methodology in computing income taxes and since the Commission has previously accepted each of Public Staff witness Toms' adjustments, the Commission concludes that his computation of state and federal income taxes is proper after modification to reflect the income tax effect of Commission adjustments previously discussed. Therefore, the Commis-

sion concludes that the appropriate level of state and federal income tax expense for use in this proceeding under existing rates is $2,811,808 on a N.C. Retail basis.

In summary, the Commission concludes that the appropriate level of operating revenue deductions for use in this proceeding is $13,976,104 on a N.C. Retail basis, consisting of the following:

Item	*Amount*
Purchased power	$ 1,907,827
Other operation and maintenance expense	6,188,583
Depreciation and amortization	1,547,242
Taxes other than income	1,520,644
Income taxes—State and Federal	2,690,322
Deferred	—
Deferred in prior years	(65,584)
Investment tax credit normalized	238,031
Amortization of investment tax credit	(50,961)
Total operating revenue deductions	$13,976,104

EVIDENCE AND CONCLUSION FOR FINDINGS OF FACT NOS. 13 AND 14

Two witnesses were originally presented in the area of cost of capital and capital structure. The Company offered the testimony of Joseph F. Brennan, President of Associated Utility Services, an independent consulting firm. The Public Staff offered the testimony of Dr. Robert Weiss, of the Economic Research Division. In addition, the Company offered two rebuttal witnesses. Witness Brennan presented rebuttal testimony to Dr. Weiss' use of a hypothetical capital structure in determining the overall rate of return. Jeff D. Makholm, staff econometrician of Associated Utility Services, Inc., presented rebuttal testimony to the statistical analysis employed by Dr. Weiss.

Witness Brennan prefiled testimony and exhibits with the Company's application. He later filed supplemental testimony and updated 15 of his 18 exhibits. Witness Brennan recommended an overall rate of return of 11.35% in his original testimony. This was based on an estimate of the Company's capital structure at the end of 1980 and a cost of equity capital of 14.5%.

In his supplemental testimony, witness Brennan recommended the use of the actual 1980 capital structure, the Company's embedded cost of debt, and a cost of equity capital of 16.5%. The resulting overall rate of return was 12.46%.

In testimony given from the stand, witness Brennan recommended a 12.79% overall rate of return. This was based on the Company's actual capital structure at the end of 1980, which showed 49.3% debt and 50.7% equity, and an embedded cost of debt of 8.46%. The return to common equity recommended by witness Brennan was 17%.

Witness Brennan used a variety of techniques to arrive at his recommendation as to the cost of equity capital. These included earnings/price ratios (with a result of 18.3%), a discounted cash flow model (17.1%), bare rent approach (19.5%), and a comparable earnings approach (13%). The arithmetic average of these results is 17%, and it was witness Brennan's judgment that was the appropriate rate to use as the cost of equity capital to Nantahala.

In his prefiled testimony Dr. Weiss recommended a 10.71% overall rate of return based upon a capital structure consisting of 40% equity, 10.72% preferred stock, and 49.28% long-term debt. The cost rate for debt and preferred stock was 8.19% and the cost rate for common equity was 14.5%. The common equity return used by Dr. Weiss was that requested by the Company in its application.

In testimony given from the stand, Dr. Weiss recommended the use of figures based on more recent data. Specifically, he accepted witness Brennan's figure on the embedded cost of debt at 8.46% and stated that it should also be applied to the preferred stock in his hypothetical capital structure. He also

accepted the debt ratio of 47.1% recommended by witness Brennan. With respect to the cost of common equity, he stated that it was his opinion, based on recent studies, that the cost of common equity to Nantahala would be in the range of 16½% to 17%.

Dr. Weiss testified that he recommended the use of a hypothetical common equity ratio of 40% because he found that Nantahala's actual common equity ratio of more than 50% is substantially out of line with the actual capitalization of the electric utility industry. He stated that the average common equity ratio for 99 large electric utilities was 37.6%, and he chose 40% as reasonably close to the industry average. Recognizing that Nantahala is substantially smaller than the utilities in his sample, he performed a statistical test to determine if size was a determinant of equity ratio. He stated that he found no statistically significant relationship and concluded that smaller utilities did not generally have higher common equity ratios than larger utilities. For the remainder of his hypothetical capital structure, he employed preferred stock, a traditional means of financing the electric utility industry. The cost rate he used was the Company's embedded cost of debt. The basis for this was that the cost of debt and preferred stock have been approximately the same in recent years.

Company witness Brennan testified in rebuttal to the capital structure used by Dr. Weiss. He stated that Dr. Weiss' use of an industry average was not appropriate because Nantahala was not representative of the industry, primarily because it is much smaller than any of the firms examined by Dr. Weiss. He also stated that the earlier goal of the Company, to achieve a capital structure consisting of 55% debt, 5% preferred stock, and 40% equity, might no longer be appropriate. In any case the Company had striven to meet the goals and had done all it could and its earnings had been inadequate to allow further leverage. Over the long term, perhaps, more leverage might be possible, but generally preferred stock would have been inappropriate for a firm the size of Nantahala.

Witness Makholm testified in rebuttal to the statistical methodology employed by Dr. Weiss in reaching his conclusion that

size and common equity ratio were not related. He stated that a close examination of the relationship between the common equity ratio and total capitalization of electric utilities reveals that there is a distinct probability that a significant relationship does exist.

With respect to the components making up the overall rate of return to be allowed in this case, the parties were in agreement on most issues. The witnesses agreed that the embedded cost of Nantahala's debt is 8.46%. The witness for the Company stated that the cost of equity was 17%, while the witness for the Public Staff put it between 16½% and 17%. The major disagreement was on the proper capital structure to use in the setting of rates. The witness for the Company stated it should be the actual capital structure, while the witness for the Public Staff stated it should be a hypothetical capital structure consisting of 40% common equity, 47.1% debt (the actual debt ratio of Nantahala), and 12.9% preferred stock at a cost rate of 8.46% (identical to the cost rate for debt).

The Commission is not in total agreement with witness Brennan's cost of capital methodology. The use of the earnings/price ratio as a partial cost of equity is not acceptable in that it does not satisfactorily account for any growth in earnings. After considering the evidence, the Commission is of the judgment that a fair and reasonable return on common equity is 16.5%.

The Commission has considered carefully the issue of the capital structure to be used in determining the overall rate of return and the rates to be set in this proceeding. It is the Commission's opinion that the following capital structure is appropriate for use herein:

Debt	49.3%
Common equity	50.7
Total	100.0

Further, the Commission concludes that the appropriate reasonable cost rate for debt is 8.46%. Based upon the foregoing and the entire record in this docket, the Commission finds and concludes that the fair rate of return that Nantahala

Power and Light Company should have the opportunity to earn on its rate base is 12.54%. Such fair rate of return will yield a fair return on common equity of approximately 16.5%.

The Commission cannot guarantee that the Company will, in fact, achieve the level of returns herein found to be just and reasonable. Indeed, the Commission would not guarantee it if it could. Such a guarantee would remove necessary incentives for the Company in order to achieve the utmost in operational and managerial efficiency. The Commission believes, and thus concludes, that the level of returns approved herein will afford the Company a reasonable opportunity to earn a reasonable return for its stockholders while providing adequate and economical service to the ratepayers. The Commission can do no more.

EVIDENCE AND CONCLUSION FOR FINDINGS OF FACT NOS. (9, 10), 15, 16, AND 17

Based upon the findings of fact set forth herein above, the Commission concludes that the approximate annual level of revenues which Nantahala should be authorized to collect through rates charged for its sales of service is $15,735,791; that the rates and charges of Nantahala, based upon the adjusted test year level of operations, under rates approved by Commission Order of June 14, 1977, are excessive to the extent that said rates produce a level of revenues which is $2,146,798 ($17,882,589 - $15,735,791) greater than the Applicant's revenue requirement (cost of service); that Nantahala should be required to reduce said rates and charges in a manner so as to achieve an annual gross revenue reduction from the rates approved by the Commission Order of June 14, 1977, of approximately $2,146,798, based upon the adjusted test year level of operations; and that Nantahala should be required to refund to its North Carolina retail customers all revenue collected under the rates approved by Commission Order issued June 14, 1977, and the rates placed into effect August 1, 1981, to the extent that said rates produced revenue in excess of the rates approved herein. Said refund shall include reve-

nues collected under the Company's base rate structure as well as through operation of the Purchased Power Adjustment Clause plus interest computed and compounded at the legal annual rate. The methodology to be used in the determination of the level of excess revenues collected under the Purchased Power Adjustment Clause will be discussed subsequently.

The following charts summarize the gross revenues and the rates of return which the Company should have a reasonable opportunity to achieve, based upon the level of revenues approved herein. Such charts, illustrating the Company's gross revenue requirements, incorporate the findings, adjustments, and conclusions herein made by the Commission.

SCHEDULE I

NANTAHALA - TAPOCO COMBINED SYSTEM

North Carolina Retail Operations

STATEMENT OF OPERATING INCOME

Twelve Months Ended December 31, 1979

	Present Rates	*Decrease Required*	*Approved Rates*
Operating Revenues:	*$17,882,589*	*$2,146,798*	*15,735,791*
Operating Revenue Deductions:			
Purchased Power	1,907,827	—	1,907,827
Other operation and maintenance	6,188,583	—	6,188,583
Depreciation and amortization	1,547,242	—	1,547,242
Taxes — other than income	1,520,644	128,808	1,391,836
Income taxes—State and Federal	2,690,322	993,658	1,696,664
Deferred	—	—	—
Deferred in prior year	(65,584)	—	(65,584
Investment tax credit normalized	238,031	—	238,031
Amortization of investment tax credit	(50,961)	—	(50,961
Total operating revenue deductions	13,976,104	1,122,466	12,853,63
Operating income for return	$ 3,906,485	$ 1,024,332	$ 2,882,15

SCHEDULE II

NANTAHALA - TAPOCO COMBINED SYSTEM

North Carolina Retail Operations

STATEMENT OF RATE BASE AND RETURN

Twelve Months Ended December 31, 1979

	Approved Rates	*After Approved Rates*
Investment in Electric Plant		
Electric plant in service	$50,161,648	$50,161,648
Construction work in progress	371,262	371,262
Accumulated provision for depreciation	(25,539,709)	(25,539,709)
Accumulated deferred income taxes	(2,973,551)	(2,973,551)
Accumulated deferred investment tax credit—pre-1981	(64,370)	(64,370)
Net original cost of electric plant	21,955,280	21,955,280
Allowance for Working Capital		
Cash working capital	625,057	625,057
Materials and supplies	497,389	497,389
FERC license adjustment	48,076	48,076
Unamortized maintenance	56,607	56,607
Customer deposits	(191,917)	(191,917)
Total allowance for working capital	1,035,212	1,035,212
Original Cost Rate Base	$22,990,492	$22,990,492
Rate of return	16.99%	12.45%

SCHEDULE III

NANTAHALA - TAPOCO COMBINED SYSTEM

North Carolina Retail Operations

STATEMENT OF CAPITALIZATION AND RELATED COSTS

Twelve Months Ended December 31, 1979

	Original Cost Rate Base	*Ratio %*	*Embedded Cost %*	*Net Operating Income*
	Present Rates—Original Cost Rate Base			
Long-term debt	$11,334,313	49.3	8.46	$ 958,883
Common stock	11,656,179	50.7	25.29	2,947,602
Total	$22,990,492	100.00	—	$3,906,485
	Approved Rates—Original Cost Rate Base			
Long-term debt	$11,334,313	49.3	8.46	$ 958,883
Common equity	11,656,179	50.7	16.50	1,923,270
Total	$22,990,492	100.00	—	$2,882,153

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 18

Evidence for this finding of fact is based on the testimony of Company witness Jontz and on tariffs filed with the North Carolina Utilities Commission.

The Applicant presently bases the monthly billings for approximately 2/3 of its residential customers on bimonthly meter readings. The Applicant's present method of calculating the monthly bill for customers whose monthly billings are based on bimonthly meter readings is to estimate the bill for the first month when the meter is not read based on the average kWh/month usage during previous historical billing periods. The estimated bill also includes the Purchased Power Adjustment (PPA) for the first month. The Applicant determines the bill for the second month when the meter is read by calculating the total amount of the bimonthly bill based on the assumption that exactly 1/2 of the total bimonthly kWh usage occurred in the first month and exactly 1/2 occurred in the second month. That assumption is used for calculating both the bimonthly base rate and the bimonthly PPA. The Applicant then deducts the amount of the first month's estimated bill (if already paid by customer) from the total bimonthly bill, leaving the balance as the bill for the second month.

The Intervenors contend that it is possible for customers with bimonthly meter readings to pay more (or less) than customers with monthly meter readings under the Applicant's present practice, rendering the practice discriminatory. The Intervenors proposed a revised method for estimating the bill for the first month when meters are not read.

Under the Intervenor's proposal, the method for estimating the first month's bill would be even more complex than it already is; i.e., it would multiply the ratio of (1) the residential class kWh usage during the first month v. (2) the residential class kWh usage for the entire year (both based on historical data) times the individual customer's kWh usage for 12 months to calculate the individual customer's average kWh/month usage during the previous bimonthly billing period. Customer understanding would not be enhanced, ease of calculation

would not be improved, and the method would still result in estimated bills for the first month of the bimonthly period. The Intervenors did not present any evidence to show that its proposal will result in any less discrimination than the Applicant's present practice.

There will always be residential customers whose individual usage patterns are different from the overall average usage pattern of the residential class, and there have always been customer complaints regarding estimated bills which are based on average usage patterns of a customer class. The Intervenor's proposal would not eliminate or even reduce customer complaints regarding estimated bills. The only way to eliminate customer complaints regarding estimated bills is to institute monthly meter reading for all residential customers. The evidence in this proceeding tends to show that any elimination of customer complaints regarding estimated bills would be at the expense of perhaps $3.00 to $4.00 per year higher bills for *each* residential customer now subject to estimated bills in order to offset the additional cost of meter reading. The Commission concludes that such additional cost would be justified in order to eliminate any discrimination which might result from the estimated bills.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 19

The Commission has concluded that approximately 26.56% of Nantahala's total demand-related purchased power cost and approximately 26.06% of Nantahala's total energy-related purchased power cost is properly assignable to its North Carolina retail operations. Therefore, in the interest of fairness and equity, the Commission is compelled to find and conclude that to the extent the Applicant has recovered from its North Carolina retail customers via its Purchased Power Adjustment Clause the cost of purchased power exceeding 26.56% of total Nantahala-Tapoco demand-related costs and 26.06% of total Nantahala-Tapoco energy-related costs, said recoveries are unjust and unreasonable and should be refunded to the Applicant's North Carolina retail customers. Further, the

Commission concludes that the purchased power base unit cost and the Purchased Power Adjustment Clause should be formulated in a manner so as to permit recovery of only that portion of the cost of purchased power attributable to the Applicant's North Carolina retail operations; i.e., 26.56% of total Nantahala-Tapoco demand-related cost and 26.06% of total Company energy-related cost. The Commission further concludes that the Applicant should list the Purchased Power Adjustment as a separate item on each billing in order to show the customers what changes in their monthly bills are due to kWh usage and what changes are due to the cost of Purchased Power.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 20

In its Order of March 13, 1981, the Commission held that the Supreme Court's decision in *Utilities Commission* v. *Edmisten*, N.C. (1980) respecting a roll-in determination was applicable to this case independently and irrespective of whether such a determination was to be required in Docket No. E-13, Sub 29 (remanded). Thereupon, Nantahala was ordered to file roll-in data and, thereafter, Alcoa and Tapoco were brought in as parties. On August 1, 1981, Nantahala, under authority given, placed its prepared rates into effect superseding rates approved by Commission Order of June 14, 1977, in August 13, 1981, and on August 12, 1981, filed an undertaking to refund

> ". . . in a manner prescribed by order of the Commission to customers entitled hereto (with interest from the date such rates and charges are put into effect at the rate of ten percent (10%) per annum) by which the proposed rates and charges be put into effect are finally determined to be excessive, such refund to be made within thirty (30) days after such final determination; . . ."

On July 22, 1981, the Intervenors moved that Alcoa and Tapoco join the execution of the undertaking or that they

stand joined as guarantors to the bond. The motion was renewed at the close of the hearing. The motion stated, in part,

> "The reasons are essentially the following: (1) Alcoa and Tapoco have been joined as parties of record to this proceeding; (2) Their interests are substantially adverse to those of the Intervenors; (3) Alcoa is the 100% owner of both Nantahala and Tapoco, and, as such, dominates and controls their authorities; (4) Alcoa has received "concealed" benefits through Tapoco in this relationship; (5) If relief is ultimately afforded to Nantahala's ratepayers through the roll-in technique, relief may likewise have to be granted against Alcoa, or Tapoco or both. . ."

The motion incorporated by reference a similar motion made in Docket No. E-13, Sub 29 (remanded).

In this Order the Commission finds that Alcoa and Tapoco are public utilities; that Nantahala and Tapoco are wholly owned subsidiaries of Alcoa; that the Nantahala and Tapoco electric facilities constitute a single, integrated electric system and are operated by TVA as a coordinated part of the TVA system. The Commission further finds that for purposes of setting rates in this proceeding the Nantahala and Tapoco systems should be treated as one entity. Further, the Commission finds that the New Fontana Agreement, executed by TVA, Alcoa, Nantahala, and Tapoco, and the resultant 1971 Apportionment Agreement between Tapoco and Nantahala, have resulted in substantial benefits to Alcoa and significant detriment to the customers of Nantahala. Finally, the Commission finds that by virtue of these facts Alcoa has dominated certain transactions and agreements affecting its wholly owned subsidiary Nantahala so that Nantahala has been left but an empty shell, unable to act in its own self interest, let alone in the interest of its public utility customers in North Carolina, and that it should pierce the corporate veil.

The evidence in this proceeding discloses inequities to Nantahala that arise out of both the New Fontana Agreement (NFA) and the 1971 Tapoco-Nantahala Apportionment Agreement.

This evidence is fully described in Evidence and Conclusions for Findings of Fact Nos. 6 and 7. Moreover, the evidence in this proceeding, as fully described in Evidence and Conclusions for Findings of Fact Nos. 6 and 7, clearly and unambiguously demonstrates that the NFA was tailored to meet Alcoa's aluminum production needs with minimal consideration of Nantahala's public service needs in western North Carolina. The Commission has noted elsewhere that Nantahala, while obligated under the original Fontana Agreement, was not a signatory thereto. The original Fontana Agreement still conveys benefits to Alcoa. Although Nantahala was a signatory to the New Fontana Agreement, it did not participate in the negotiations of that agreement. Alcoa's dominance over its wholly owned subsidiaries Nantahala and Tapoco during the course of the New Fontana negotiations has resulted in substantial benefits to Alcoa and significant detriment to the customers of Nantahala. Tapoco is the conduit through which most of these benefits to Alcoa have flowed. Witness Springs testified:

> ". . . The 1963 Apportionment Contract shows on its fact that the New Fontana Agreement was never intended as a 20-year power supply for NP&L public load. It appears that NP&L's officers and consultants were primarily concerned with the effect of the Agreement on the ongoing rate case and transfer cases before the NCUC and not with the interest of NP&L ratepayers over the 20-year period of Agreement."

The Commission again concludes that Alcoa has dominated these transactions and agreements affecting its wholly owned subsidiary Nantahala to the extent that Nantahala has been left unable to act in its own self interest, let alone in the interest of its public utility customers in North Carolina. Alcoa's domination of Nantahala in these transactions has resulted in Nantahala's collecting through its base rates, excess revenue from its customers in the amount of approximately $2,626,985 a year since September 3, 1981, based upon rates approved by this

Commission under date of June 14, 1977, exclusive of rates increased by the Company under its increased rates put into effect August 1, 1981, which increases are also to be refunded. Moreover, this inequity is further magnified by the fact that Nantahala has collected significantly additional excess revenues through operation of its Purchased Power Adjustment Clause. Therefore, this Commission concludes that it should pierce the corporate veil and order that, to the extent Nantahala is financially unable to make the revenue refunds required by this Order, Alcoa shall refund all or any portion of the aforementioned revenue refunds that Nantahala is financially unable to make.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 21

The evidence for this finding of fact consists of the testimony and exhibits of Company witness Tucker and of the records of the Commission.

The major changes Nantahala proposes for its Service Rules and Regulations include: (1) an increase from $5.75 to $7.50 in the fee for reconnecting service suspended by the Company, (2) the addition of a $5.00 connection fee for new customers, (3) deletion of the refundable deposit provision for connection of temporary service, and (4) addition of a section governing master metering of residential units.

Although Nantahala proposes no major structural changes in its rate design, it does propose to reduce variations in the rates of return for the various rate classes. Other changes Nantahala proposes for its rate schedules include: (1) deletion of availability of florescent lamps and fixtures for new street lighting customers, (2) revision of contract terms for yard lighting service, and (3) addition of a clause on each rate schedule governing surcharges for funding the Alternative Energy Corporation.

Nantahala also proposes to change the base of the Purchased Power Adjustment Clause (PPAC) to reflect the April 1981 level of TVA rates. This requires that a substantial portion of the PPAC revenues be merged into the base rate

revenues, with corresponding increases in the base of the PPAC and the base rates.

The proposed new rate schedules and Service Rules and Regulations were essentially unopposed by the other parties, and the Commission concludes that they should be approved. The Commission has determined in other proceedings that it is in the best interest of the ratepayers and the entire state that support be given to the North Carolina Alternative Energy Corporation (NCAEC). Therefore, consistent with its previous determinations, the Commission concludes that .003567¢ per kWh should be added to each energy block of Nantahala's retail rate schedules (inluding a corresponding amount in the lighting schedules) for the purpose of providing funding to the NCAEC.

FEDERAL QUESTIONS

The Respondents have in this proceeding raised certain federal questions which should be addressed in this Order. These federal questions relate to whether the roll-in technique adopted in this Order is unlawful because it conflicts with federal authority under Parts I and II of the Federal Power Act and The Tennessee Valley Authority Act and because it constitutes an undue burden on interstate commerce.

1. Part II of the Federal Power Act

a. The roll-in does not conflict with the preemptive jurisdiction of FERC to fix and regulate interstate wholesale electric rates.

The Commission recognizes that the FERC has exclusive jurisdiction to regulate wholesale rates and that states may not interfere with this jurisdiction. However, the current docket is involved exclusively with the setting of retail rates for Nantahala. The case *does not involve* any attempt by this Commission to fix, establish, amend, alter, invalidate, or modify rates or agreements approved by FERC. Not a single word of any of the contracts, apportionments, or agreements as between TVA-

Nantahala, TVA-Tapoco, Nantahala-Tapoco, or Tapoco-Alcoa has been changed, nor were any of the rates set by those agreements changed.

Indeed, the only thing which this Commission has done is to set retail rates for Nantahala similarly to the remand order of the North Carolina Supreme court in the *Edmisten* case, 299 N.C. 432, 263 S.E. 2d 583 (1980), Docket No. E-13, Sub 29 (remanded). Having determined that the use of an appropriately performed roll-in of Nantahala and Tapoco (which is a question of *Fact*) would be beneficial to Nantahala's customers, the Commission concludes that rates based upon such a roll-in should be placed into effect.

It is entirely appropriate for a state commission to regulate retail rates. Congress has clearly indicated a desire to draw a bright line between federal regulation of interstate or wholesale rates and state regulation of intrastate or retail rates. *FPC* v. *So. California Edison*, 376 U.S. 205, 84 S. Ct. 644, 11 L. Ed. 2d 638 (1944).

The Commission concludes that the use of the roll-in as contained in this Order is in all respects proper, consistent with the remand of the North Carolina Supreme Court in Docket No. E-13, Sub 29, and not in conflict with FERC's jurisdiction over the various wholesale contracts, agreements, and rates, either in law or in fact.

b The Order does not intrude upon the authority vested in FERC by Part II of the Federal Power Act by failing to accept the costs of filed rates.

Several of the Agreements and contracts as between and among Nantahala, Tapoco, Alcoa, and TVA constitute "filed rates" with FERC. What Applicant and Respondents apparently fail to realize is that no reasonable cost incurred by either Nantahala or Tapoco has been omitted from consideration. Every reasonable and proper cost was included in the data utilized and relied upon by the Commission in calculating the combined Nantahala-Tapoco cost of service on a roll-in basis.

The reason rates were lowered was not from a failure by the Commission to recognize legitimate costs, but because, as the Commission has noted, the roll-in technique combines the lower cost of Tapoco production with the higher cost of Nantahala production and allocates those costs between Alcoa and Nantahala's retail customer load. Since Nantahala and its customers are responsible for only about 28% of the combined Nantahala-Tapoco costs, and since Tapoco has lower per unit production costs, Nantahala benefits from the roll-in and its rates can be lowered.

The costs of the Alcoa-TVA Supplemental Purchase Power Agreement were not included since these do not constitute a filed rate applicable to the Nantahala-Tapoco combined system. They are a separate matter entirely between TVA and one of its large industrial customers. Even if such costs had been included, they could properly have been attributed only to Alcoa and hence could not change the Commission's determination of the proper rates and charges for Nantahala.

c. This Order does not intrude upon the federal domain by disrupting the fabric of rates charged to Alcoa by Tapoco and TVA.

As noted, this Order does not infringe in any way upon the TVA-Alcoa Supplemental Purchase Power Agreement. Neither does the Order attempt, much less accomplish, any change whatsoever in rates charged by Tapoco to Alcoa. The Fontana Agreements, Apportionment Agreement, and Alcoa Supplemental Power Agreement remain in effect exactly as before.

Again, at the risk of repetition, the roll-in is not a technique for disrupting the fabric of fixed economical relationships under filed FERC rates. It is, instead, merely a court-approved method of combining financial data and allocating costs of the two companies, Nantahala and Tapoco, which have been found to constitute a single, integrated public utility system.

2. Part I of the Federal Power Act

The Applicant and Respondents contend that all of the hydroelectric power of the Santeetlah, Cheoah, Calderwood, and Chilhowee Dams is, by federal license, reserved for Alcoa in that the 1955 license states that " . . . All the energy is used for aluminum production except for a small portion used for lighting in operator's villages . . .". This argument is without merit.

The license application to FERC was a joint one made by both Tapoco and Carolina Aluminum (now Yadkin, Inc.). At the time of application on October 25, 1954 (14 FPC 610), Carolina Aluminum was a North Carolina public utility carrying a public service load in North Carolina, and it continued its public service load to other than Alcoa at Badin, North Carolina, for some time thereafter. At the time of application, Tapoco was a Tennessee public utility carrying a public service load in Tennessee for the town of Alcoa, and it continued its public service load to other than its parent Alcoa until December 31, 1955 (see, Tapoco Exs. 7 and 8).

On February 23, 1955, Tapoco, which had earlier domesticated in North Carolina, was issued a certificate of convenience and necessity by the North Carolina Utilities Commission as a North Carolina public utility to own and operate the Santeetlah and Cheoah facilities. When Tapoco acquired ownership of these dams and obtained a certificate from this Commission, it became encumbered with an obligation to serve the public in North Carolina. Both the federal license (14 FPC 610) and the North Carolina certificate of convenience and necessity expressly note that Tapoco had an obligation to serve the public with electric energy from the projects.

The issuance of a federal license to construct and operate hydroelectric projects is a far cry from an edict by the licensing agency providing for the permanent disposition of the electrical energy (or economic output) from the project. Indeed, control of the retail sale of electrical energy production has been reserved by Congress to the states. Moreover, 16 USCA Section 802(b) requires that, prior to issuance of a license, a

licensee must submit evidence of compliance with state law "with respect to the right to engage in the business of developing, transmitting, and distributing power." In the license, the FPC found as a fact that Tapoco "has submitted satisfactory evidence of compliance with the requirements of all applicable laws for its respective State insofar as necessary to effect the purposes of a joint license for the project, to the extent of the ownership and operation of the project by each applicant." (14 FPC at 613) Of course, the evidence submitted by Tapoco to the FPC included its receipt of a certificate of convenience and necessity from the North Carolina Utilities Commission with respect to the Santeetlah and Cheoah facilities. Thus, to the extent that the federal license for Tapoco's dams speak to the dedication of the electrical energy, such dedication would include the using and consuming public in North Carolina.

In any event, the roll-in itself does not address the proposition (as the Commission has earlier noted) of diverting Tapoco's actual energy production to the North Carolina public load. All the roll-in has accomplished is to allocate the costs of production of the Nantahala-Tapoco combined system, as between the North Carolina retail public load and the Alcoa manufacturing load. This allocation is no different from other allocations routinely performed by the Commission (e.g. for Duke, CP&L or Vepco) to distinguish between the North Carolina retail load and other loads over which the Commission has no jurisdiction.

3. Regulation of Headwater Benefits

Again the Applicant and Respondents appear to believe, erroneously, that this Order will in some way confer downstream benefits to Nantahala which are precluded by federal law and regulation. To the contrary, the so-called downstream benefits are a part of the Commission's overall discussion of concealed benefits accruing to Alcoa from the Fontana Agreement, New Fontana Agreement, and the 1971 Apportionment Agreement. The sole reason for the entire discussion was not to provide a finite recovery to Nantahala of upstream benefits,

but instead was required (a) to establish a foundation for the Commission's use of the roll-in methodology recommended by Intervenors as opposed to that recommended by the Applicant and Respondents, and (b) to show a part of Alcoa's dominance over Nantahala and Tapoco which required the piercing of the corporate veil.

4. This Order does not interfere with the proper exercise of federal oversight by TVA.

The Respondents contend that this Order contravenes TVA's power to ensure that the resale of power to the ultimate consumer is reasonable and fair.

The Commission rejects this argument. The Order in no way challenges any rates set by or agreements entered into by TVA. The Order accepts without modification the various agreements between the parties and TVA and in no manner challenges or contravenes any action of TVA.

The authority of TVA cannot rationally be construed so as to extend to TVA the power to usurp proper rate setting authority now being exercised by FERC or by state commissions. [Text missing in original order] . . . anything but accept retail/wholesale rates charged by its vendees particularly when such rates were established by FERC or by a state commission.

The Commission believes that unless and until it enters an Order, which has not been done here, which injures or interferes with TVA's rates or operations, TVA not only will, but *must* accept such regulation of North Carolina retail rates by this Commission.

5. The Commission Order is not a burden on interstate commerce.

The Commission does not perceive that the Commerce Clause of the United States Constitution has any more relevance to this proceeding than to a Duke, CP&L, or Vepco retail rate proceeding. The Commission repeats that the roll-in, as here employed, does no more than establish the overall cost of operation of the single, unified Nantahala-Tapoco system

and allocate the proper portion of those costs to North Carolina retail customers for the purpose of fixing just and reasonable rates for Nantahala.

The companies rely heavily upon the very recent U.S. Supreme Court decision in *New England Power Company* v. *New Hampshire*, 50 U.S.L. W. 4223 (February 24, 1982), hereafter "NEPCO." Of course, their reliance is misplaced. As the Court stated therein:

> "These three consolidated appeals present the question whether a state can constitutionally prohibit the exportation of hydroelectric energy produced within its borders by a federally-licensed facility, or otherwise reserve for its own citizens the 'economic benefit' of such hydroelectric power.
>
> " . . . Although the precise contours of the Commission's order are unclear, it appears to require that New England Power sell electricity to New Hampshire utilities in an amount equal to the output of its in-state hydroelectric facilities at special rates adjusted to reflect the entire savings attributable to the low-cost hydroelectric generation."

The U.S. Supreme Court held that the Federal Power Act did not authorize such control and stated:

> "We conclude, therefore, that New Hampshire has sought to restrict the flow of privately owned and produced electricity in interstate commerce, in a manner inconsistent with the Commerce Clause . . .
>
> " . . . Such state imposed burdens cannot be squared with the Commerce Clause when they serve only to advance 'simple economic protectionism' . . ."

The facts of the current proceeding are far removed from the holding in NEPCO in that here the roll-in is a method of retail rate setting which accounts for concealed benefits flowing to a dominant parent from a single unified public utility system. The roll-in does not prevent electric flow out-of-state nor does

it apportion such flow. Instead, it is used to apportion the costs of electricity to the North Carolina ratepayers precisely as costs are apportioned for any electric utility doing business in more than one state.

Even if it be assumed, *arguendo*, that the Commerce Clause is applicable to the current case, the Commission does not believe that there has been any violation. The rule is that, where a local statute regulates evenhandedly to effectuate a legitimate interest, and its effects on interstate commerce are only incidental, the local statute will be upheld unless the burden on interstate commerce is clearly excessive in relation to the local benefit. *Pike* v. *Bruce Church*, 397 U.S. 137, 142, 25 L. ed. 174, 90 S. Ct. 844 (1970) The setting of retail electric rates for Nantahala's customers is clearly a legitimate North Carolina interest with a significant impact in this state. Since not a word of the contracts or agreements properly within the federal sphere have been changed, the Commission does not believe that there is any impact on interstate commerce. Even if there is, such impact is clearly *de minimis* when compared to the local interest.

The public utility system organized, controlled, and manipulated for so many years by Alcoa to serve its own manufacturing interests has now developed to such a degree that the local North Carolina interest demands that a proper allocation methodology be used so as to fairly distribute service costs between the North Carolina retail ratepayers and Alcoa's manufacturing load. The roll-in technique adopted herein accomplishes this goal without being an undue burden on interstate commerce.

IT IS, THEREFORE, ORDERED as follows:

1. That the appropriate annual level of revenues which Nantahala is hereby authorized to collect for rates charged for its sales of service, based upon the adjusted test year of operations, is $15,735,791.

2. That the rates and charges of Nantahala, based upon the adjusted test year of operations, under rates approved by Commission Order of June 14, 1977, are excessive to the extent that said rates produce a level of revenue which is $2,146,798 ($17,882,589—$15,735,791) greater than the Applicant's revenue requirement (cost of service). The June 14, 1977, rates having been replaced by the Applicant with new rates under bond effective August 1, 1981, said rates are additionally excessive to the extent of their increase in the amount of $2,147,853 annually. Thus, Nantahala is hereby ordered to reduce said rates and charges by a uniform percentage across all rate schedules and charges in a manner so as to achieve an annual gross revenue reduction in the August 1, 1981, rates of approximately $4,294,651, based upon the adjusted test year level of operations.

3. That Nantahala is hereby ordered to refund to its North Carolina retail customers all revenue collected under the rates placed into effect on August 1, 1981, to the extent that said rates produced revenue in excess of the level of rates approved herein. Said refund shall include excess revenues collected under the Company's base rate structure as well as through operation of the Purchased Power Adjustment Clause calculated in a manner consistent with the findings and conclusions set forth herein plus interest computed and compounded at the legal annual rate.

4. That Nantahala shall file for Commission approval within 10 days of the issuance date of this Order rates designed in accordance with the foregoing Ordering Paragraphs. Such rates shall include a Purchased Power Adjustment Clause formulated in a manner consistent with the Commission's findings and conclusions as set forth under Evidence and Conclusions for Finding of Fact No. 19.

5. That Nantahala shall begin calculating monthly bills for all residential customers based on monthly meter readings within 90 days after the date of this Order, said 90-day period being the time allowed for acquiring and training the addi-

tional staff and equipment necessary to implement such monthly meter readings.

6. That Nantahala shall file for Commission approval within 30 days from the issuance date of this Order its plan for making the refunds as required herein. Further, Nantahala, at such time, shall file 10 copies of its calculation of the total amount of refund due including 10 copies of all detailed work papers associated therewith.

7. That, to the extent Nantahala is financially unable to make revenue refunds required under Ordering Paragraph No. 3 above, Alcoa shall refund all or any portion of the aforementioned revenue refunds that Nantahala is financially unable to make.

ISSUED BY ORDER OF THE COMMISSION.

This is the 8th day of June 1982.

NORTH CAROLINA UTILITIES COMMISSION

/s/ SANDRA J. WEBSTER

Sandra J. Webster, *Chief Clerk*

(SEAL)

EXHIBIT A

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-13, SUB 29

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

The Rehearing of the Application of Nantahala Power & Light Company for Adjustment and Increase of Retail Electric Rates

ORDER

HEARD IN:

The Commission Hearing Room, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina on August 29, 1980

BEFORE:

Commissioner Sarah Lindsay Tate, Presiding; Chairman Robert K. Koger, and Commissioners Edward B. Hipp, A. Hartwell Campbell and Douglas P. Leary

APPEARANCES:

Appearing on Behalf of Nantahala Power & Light Company:
Mr. Robert C. Howison, Jr. and Mr. James E. Tucker
Hunton & Williams
Attorneys at Law
P. O. Box 109
Raleigh, North Carolina 27602

Appearing on Behalf of Aluminum Company of America and Tapoco, Inc.:

Mr. Ronald D. Jones and Mr. David R. Poe
LeBoeuf, Lamb, Leiby & MacRae
Attorneys at Law
140 Broadway
New York, New York 10005

Appearing on Behalf of the Using and Consuming Public:

Mr. Robert F. Page
Staff Attorney
Public Staff, North Carolina Utilities Commission
P. O. Box 991
Raleigh, North Carolina 27602

Mr. Richard Griffin
Associate Attorney General
P. O. Box 629
Raleigh, North Carolina 27602

Appearing on Behalf of Mr. Henry J. Truett:

Mr. William T. Crisp
Crisp, Smith, Davis & Schwentker
Attorneys at Law
P. O. Box 7551
Raleigh, North Carolina 27602

BY THE COMMISSION: On March 5, 1980, the Supreme Court of North Carolina handed down its decision in *State of North Carolina ex rel. Utilities Commission; Nantahala Power & Light Company, Applicant-Appellant v. Rufus L. Edmisten, Attorney General, et al; Intervenors-Appellees*, 299 N.C. 432. In its opinion the Supreme Court affirmed the decision of the Court of Appeals, 40 N.C. 109 (1979), insofar as it directed this Commission to consider whether a rate schedule computed as if Nantahala Power & Light Company and Tapoco, Inc. were one utility (a "roll-in") would be in the best interests of the customers of Nantahala. The Court held as follows:

> "The Commission erred in giving only minimal consideration to the evidence suggesting the propriety of the roll-in device. The case is remanded with directions to the Commission to obtain and consider information and data showing what Nantahala's cost of service to its customers would be if this method of rate making were used and whether Nantahala's customers would benefit thereby."

The Supreme Court left to the discretion of the Commission the choice of procedure to obtain the necessary information for this computation. The Supreme Court reversed that part of the Court of Appeals' decision which vacated the Commission's Order of 14 June 1977, in this docket authorizing an increase in Nantahala's retail electric rates; the Court also dissolved its writ of supersedas staying the mandate of the Court of Appeals. The Court allowed the rates approved in 1977 to continue in effect. The Supreme Court, however, directed the Commission to require Nantahala to insure its ability to refund any excess charges that may be found to have been collected upon final determination of the rate schedule proper to this case.

The Supreme Court remanded this case to the Court of Appeals for remand to the Utilities Commission for further proceedings consistent with its opinion.

On May 9, 1980, the Intervenors in this docket filed with the Commission a Motion for Rehearing Before the Full Commission. The Intervenors are Rufus L. Edmisten, Attorney General of North Carolina, Henry J. Truett, Town of Bryson City, and Swain County. On May 19, 1980, Nantahala filed its Response to Motion for Rehearing before the Full Commission.

On May 14, 1980, the Intervenors filed the following pleadings: Motion for Prehearing Conference; Motion for Hearing Respecting Applicant's Ability to Refund Possible Overcharges; Motion to Join Alcoa and Tapoco, Inc., as Parties.

In response to these Motions, Nantahala filed the following pleadings on June 4, 1980: Response to Motion for Prehearing Conference; Response to the Motion for Hearing Respecting

Applicant's Ability to Refund Possible Overcharges; and Response to the Motion to join Alcoa and Tapoco, Inc., as Parties.

On June 6, 1980, Aluminum Company of America (Alcoa) and Tapoco, Inc., each filed a separate Response to Motion to Join Alcoa and Tapoco, Inc., as Parties. On June 27, 1980, Intervenors filed "Intervenors' Reply to Applicant's Response to Motion for Rehearing Before the Full Commission" and "Intervenors' Reply to Applicant's Response to Motion for Refund of Possible Overcharges."

Upon consideration of the foregoing pleadings, the Commission concluded that these pleadings should be set for oral argument before the full Commission and scheduled the matter for hearing on July 11, 1980. The matter came on for argument as scheduled, and with Nantahala, Tapoco, Inc., Alcoa, and the Intervenors being present and represented by counsel.

On July 29, 1980, the Commission issued "Order Setting Hearing and Requiring Data and Testimony" wherein the Commission ordered *inter alia*, that a hearing be scheduled for Thursday, August 28, 1980, to allow Tapoco, Inc. (Tapoco) and Alcoa to appear and contest the Commission's jurisdiction to join them as parties to this proceeding. On order of the Chairman, this hearing was rescheduled for August 29, 1980. The matter came on for hearing as scheduled. Appearing at the hearing through counsel were the following parties: the Attorney General of North Carolina; the Public Staff; Mr. Henry F. Truett, a customer of Nantahala; Nantahala, Tapoco, and Alcoa. Tapoco and Alcoa appeared specially to contest the Commission's jurisdiction. Alcoa presented a Statement of Position By Alcoa, but did not present evidence. At the hearing the Attorney General sponsored and identified through counsel twelve exhibits which were received into evidence. Tapoco presented the testimony of Mr. George J. Myers, President of Tapoco and Manager of Alcoa's Tennessee operations. Mr. Myers sponsored some ten exhibits identified as GJM Exhibits 1-10.

Based upon the Testimony and exhibits presented at the *de novo* hearing and matters judicially noticed the Commission makes the following

FINDINGS OF FACT

1. Tapoco, Inc. (Tapoco) is a Tennessee corporation which was incorporated in 1900 as Knoxville Power Company, and which changed its name to Tapoco, Inc., in 1954. Tapoco is a subsidiary of Aluminum Company of America (Alcoa). Tapoco was domesticated in North Carolina in 1954.

Evidence for this finding is found in Tapoco GJM Exhibits 1, 3, and 4 and the testimony of George J. Myers.

2. Tapoco's articles of incorporation provide that one of its purposes is to provide power to the public. Paragraph 2 of the articles of incorporation authorizes Tapoco to exercise the power of eminent domain.

Evidence for this finding is found in Tapoco GJM Exhibit No. 2.

3. Tapoco owns and operates and maintains subject to the direction of TVA under the Fontana Agreements, four hydroelectric developments that are licensed by the Federal Energy Regulatory Commission under license number 2169. The facilities are Cullerwood and Chilhowee in the State of Tennessee and Cheoah and Santeetlah in the State of North Carolina. In addition, Tapoco owns and operates transmission lines in North Carolina running from its plants to Alcoa, Tennessee.

The Evidence for this finding is found in the testimony of George J. Myers. (Tr., Vol. I, pp. 63, 64)

4. Pursuant to G.S. 62-65 the Commission takes judicial notice of the "New Fontana Agreement" including the 1971 "Apportionment Agreement" between Nantahala and Tapoco.

A copy of the "New Fontana Agreement" and "Apportionment Agreement" were filed with this Commission in Docket No. E-13, Sub 20, on April 7, 1972, as an exhibit to the testimony of George Popovich, an employee of Alcoa.

5. Under the "New Fontana Agreement" Tapoco delivers all of its power, and Nantahala delivers most of its power, to TVA, and in return Tapoco and Nantahala receive power entitlements from TVA.

The evidence for this finding is found in the testimony of George J. Myers, Tr., Vol. I, pp. 63, 64, and the New Fontana Agreement.

6. Tapoco sells and delivers all of the power it receives under its entitlements of power to Alcoa.

The evidence for this finding is found in the testimony of George J. Myers. (Tr., Vol. I, pp. 63, 64)

7. Pursuant to G.S. 62-65 the Commission takes judicial notice from Annual Reports on file with this Commission that Nantahala is a public utility operating in North Carolina and is a wholly owned subsidiary of Aluminum Company of America (Alcoa).

8. In 1955, Carolina Aluminum Company, (now Yadkin, Inc.) was a subsidiary of Alcoa, and owned and operated the power plants located at Cheoah and Santeetlah. Nantahala owned and operated certain transmission lines which ran from the Santeetlah plant to the Tennessee-North Carolina border.

The evidence for this finding is found in the testimony of George J. Myers, Tr., Vol. I, p. 70 and Tapoco GJM Exhibit No. 6.

9. On February 16, 1955, Tapoco, Carolina Aluminum, and Nantahala jointly filed with the North Carolina Utilities Commission for (1) permission for Nantahala to abandon and transfer transmission lines from Santeetlah to the North Carolina-Tennessee border; (2) permission for Carolina Aluminum to abandon and transfer to Tapoco, the Cheoah and Santeetlah hydro-electric facilities, and (3) the grant of a certificate of public convenience and necessity to Tapoco to purchase and operate the Santeetlah and Cheoah facilities, and Nantahala's aforesaid transmission lines.

10. The joint application alleged that Nantahala was serving the Villages of Tapoco (approximately 250 people) and San-

teetlah (approximately 50 people), and that the energy needed to serve these people was being provided by Carolina Aluminum Company. The application stated that in the event that requests contained in this petition are granted, Tapoco "agrees that it will arrange to have made available to Nantahala Power & Light Company so much electric energy as is required by Nantahala to meet the requirements of the public service load on its distribution system in the Villages of Tapoco and Santeetlah, which assurance is satisfactory to Nantahala."

11. By Order issued February 23, 1955, in Docket No. E-27, the Commission did the following:

> (1) Authorized Nantahala to abandon the properties described in the application and to sell and transfer them to Tapoco;
>
> (2) Authorized Carolina Aluminum Company to abandon the operation of the properties described in the application and to sell and transfer them to Tapoco.
>
> (3) Granted to Tapoco a certificate of public convenience and necessity authorizing it to acquire, control, and operate the properties and electric facilities described in the application. In this Order, the Commission required Tapoco to provide Nantahala with the power needed to serve the Villages of Tapoco and Santeetlah. The Order also found that the sale and transfer of properties will improve the operations of the applicants and will not be detrimental to the public interest.

The evidence for findings 9, 10, and 11 are found in Tapoco GJM Exhibit No. 6.

12. Tapoco's certificate of public convenience and necessity is active, and Tapoco has never petitioned to have its certificate abandoned.

The evidence for this finding is found in the testimony of George J. Myers, Tr. Vol. II, p. 35, and in the Commission records.

13. Nantahala presently provides service to the Village of Tapoco. Tapoco has the responsibility to make available a tap point on its station service transformer at the Cheoah power house and this tap is available for Nantahala to provide the electricity for serving its customers in the Village of Tapoco. Nantahala, through approved rates, charges for the electricity it sells these customers in Tapoco.

The evidence for this finding is found in the testimony of George J. Myers. (Tr. Vol. I, p. 76)

Based on the foregoing *FINDINGS OF FACT*, the Commission reaches the following

CONCLUSIONS RELATING TO TAPOCO

In making the determination of whether this Commission has jurisdiction over Tapoco, we begin with the regulatory framework as established by Chapter 62 of the General Statutes of North Carolina. This legislation confers upon this Commission broad authority and jurisdiction over public utilities in North Carolina. Thus, if Tapoco is a public utility as defined by N.C.G.S. 62-3(23), the Commission may exercise jurisdiction over Tapoco. G.S. 62-3(23) provides in pertinent part as follows:

> "(23) a. 'Public utility' means a person, whether organized under the laws of this State or under the laws of any other state or country, now or hereafter owning or operating in this State equipment or facilities for:
>
> 1. Producing, generating, transmitting, delivering or furnishing electricity, piped gas, steam or any other like agency for the production of light, heat or power to or for the public for compensation;
>
> * * * * * *
>
> b. The term 'public utility' shall for ratemaking purposes include any person producing, generat-

> ing or furnishing any of the foregoing services to another person for distribution to or for the public for compensation."

N.C.G.S. 62-3(21) provides

> "Person" means a corporation, individual, cooperators, company, association, or a combination of individuals or organizations doing business as a unit, and includes any trustees, receiver, assigns, lessee, or personal representative thereof."

Applying N.C.G.S. 62-3(23)a. to Tapoco, it is clear that Tapoco owns and operates within North Carolina facilities and equipment for generating and transmitting electricity. Does Tapoco also furnish electric power to the public for compensation? The Commission concludes that it does.

Pursuant to the "New Fontana Agreement," described by Tapoco witness Myers, and judicially noticed in the record, Tapoco, Nantahala, Alcoa, and TVA have agreed to coordinate Tapoco's and Nantahala's operations in such a way as to integrate into a single system the two utilities' electrical production and distribution. Under this agreement, TVA receives all of the electrical output of the Tapoco plants, and most of Nantahala's, and in return grants to Nantahala and Tapoco average annual entitlements of power. The agreement specified that Alcoa, Nantahala, and Tapoco are to decide among themselves how these entitlements will be allocated and distributed. Nantahala and Tapoco receive a block entitlement from TVA. Nantahala is apportioned a certain amount to meet its public service load, and Tapoco receives the remainder which it sells to Alcoa.

Tapoco's witness Myers testified that the result of these agreements is that Tapoco "sells" all of its power to its sole customer, Alcoa. He testified that there are FERC rate schedules associated with both the power swap under the Fontana Agreement, and with the sale by Tapoco to Alcoa. (Tr. Vol. I, p. 65)

The Commission concludes from an examination of the terms of the Fontana Agreement, and witness Myers' testimony, that Tapoco delivers or furnishes power to the public which includes TVA and Alcoa, and that it is compensated for its deliveries to these customers within the meaning of G.S. 62-3(23)a. Firstly, it delivers power to TVA, and receives compensation in the form of the power entitlements recited in the Fontana Agreements. (In particular, the Apportionment Agreement executed June 1, 1971, recites that compensation or credits are due to Tapoco from TVA for power used for steam replacement.) Secondly, after receiving back its proper entitlement from TVA, it delivers and sells power directly to Alcoa.

The words "public" and "compensation" as they appear in N.C.G.S. 62-3(23)a. are not defined in Chapter 62 of the General Statutes of North Carolina. These words have not acquired a technical meaning, and therefore, they must be construed in accordance with their common and ordinary meaning unless a different meaning is apparent.

A commonly used, "public" means relating to or affecting the people as an organized community; of or relating to the international community of mankind in general. *Webster's Third New International Dictionary*, 1836 (1977). Thus defined, the word "public" as used in G.S. 62-3(23)a., includes both TVA, a governmental agency, and Alcoa, a corporation, as members of the public.

"Compensation" means the act of making up, making good, or counterbalancing; rendered equal, something that constitutes an equivalence or recompense. *Webster's Third New International Dictionary*, 463 (1977). Does Tapoco receive an equivalence or recompense for power delivered? We conclude that it does. When Tapoco delivers power to TVA under the "New Fontana Agreement," it receives certain entitlements of power. These entitlements are an equivalence or recompense within the meaning of the word "compensation." Further, in the instances where Tapoco transmits power to Alcoa, it again receives compensation. Tapoco's witness Myers testified that Tapoco sells the power to Alcoa (Tr. Vol. I, p. 65), which

indicates some sort of compensation, monetary or otherwise, is received. Tapoco admits the power is not given to Alcoa.

In concluding that Alcoa and TVA are members of the public within G.S. 62-3(23)a., the Commission observes that this statute does not indicate that the furnishing of electricity to the public must be in North Carolina. The only restriction to North Carolina in G.S. 62-3(23)a. is that the facilities or equipment be located in North Carolina. For these reasons, the Commission concludes that Tapoco is a public utility as described in G.S. 62-3(23)a.

Next we analyze the facts relating to Tapoco under G.S. 62-3(23)b. Applying this statute to Tapoco, the Commission concludes that in addition to being a public utility under N.C.G.S. 62-3(23)a., Tapoco is also a "public utility" for rate-making purposes. When Tapoco furnishes power, pursuant to the Fontana Agreements, and TVA uses such power to serve the public under approved tariffs, Tapoco is furnishing electricity to another person for distribution to or for the public for compensation within the meaning of G.S. 62-3(23)b. As "public" is broadly defined above, this statute applies whether members of the public are interpreted to include municipal systems, cooperatives, utilities, or individuals. Again, the Commission concludes that under N.C.G.S. 62-3 (23)b. as well as G.S. 62-3(23)a., there is no restriction that the distribution be in North Carolina.

Tapoco also distributes power to another for distribution to or for the public for compensation under G.S. 62-3(23)b., when pursuant to the terms of the Commission's Order granting Tapoco a certificate of convenience and necessity, it supplies power to Nantahala to serve the Village of Tapoco in Graham County. Tapoco complies with this Order by making available to TVA, pursuant to the terms of the New Fontana Agreement, a tap point on the Cheoa [sic] powerhouse section transformer for the delivery to Nantahala by TVA of certain of its New Fontana Agreement entitlements. All of the distribution lines serving the village are owned by Nantahala and the residents are billed by Nantahala for the electric service they receive. (Tr., Vol. I, p. 76)

The Commission has considered Tapoco's contentions that G.S. 62-3(23)b. does not apply to this delivery of power in that only eleven residents of the Village of Tapoco are presently being served, and in that these villagers are employees of Tapoco within G.S. 62-3(23)d.(ii). These contentions are without merit. In applying G.S. 62-3(23), it is immaterial that the service is limited to a specified area and that the facilities are limited in capacity. *Utilities Commission v. Telegraph Co.*, 267 NC 257 (1966). Further, the exclusionary proviso found in G.S. 62-3(23)d.(ii) relating to service by a corporation, not otherwise a public utility, to its own employees does not apply here. Tapoco is otherwise a public utility, and it is Nantahala, and not Tapoco which provides service to the residents of the Village of Tapoco.

In addition to being a public utility within the meaning of G.S. 62-3(23), Tapoco is a public utility in North Carolina by virtue of its having obtained and operated under a certificate of public convenience and necessity granted by this Commission. By Order of the Commission issued on February 23, 1955, Tapoco was granted a certificate of public convenience and necessity authorizing it to acquire, control and operate certain electric utility properties belonging to Nantahala and Carolina Aluminum Company, both being public utilities. By the terms of this Order, the Commission allowed Carolina Aluminum and Nantahala to abandon these same properties. In granting Tapoco a certificate, the Commission found that allowing Carolina Aluminum and Nantahala to abandon plant to be owned and operated by Tapoco would not be detrimental to the public interest.

As a signatory to the joint application for a certificate of public convenience and necessity, Tapoco agreed to make available to Nantahala such electric power as Nantahala requires to serve the Villages of Santeetlah and Tapoco in Graham County. The Commission ordered Tapoco to do so. This certificate is still in effect and Tapoco has never sought to abandon it, or to have its terms modified. At the time the certificate was issued to Tapoco, approximately 300 people

lived in these villages. At the present time the Village of Tapoco still exists, and under the terms of the certificate and apportionments made in the Fontana Agreements, Tapoco supplies power to Nantahala which in turn serves the Village of Tapoco.

The Commission concludes that Tapoco has obtained a certificate of public convenience and necessity from this Commission, and has operated under that certificate for twenty-five years to meet a public service load, and cannot now logically assert it is not a public utility. "One does not need a certificate of public convenience and necessity in order to engage in a business which is not that of a public utility as defined in G.S. 62-3(23)." 267 NC 257 at 267 (1966). Only a public utility can obtain a certificate to operate a public utility plant in North Carolina. G.S. 62-110. For the Commission to permit Nantahala and Carolina Aluminum as utilities to abandon their respective utility plant operations to Tapoco, it was necessary that Tapoco be a public utility. G.S. 62-110. To grant a certificate of public convenience and necessity to conduct a business which is not a public utility within the definition of the statute, would be both arbitrary and in excess of the statutory authority of the Commission. *Utilities Commission v. Telegraph Co., Supra* at 267. By signing the joint application, it appears that in 1955 Tapoco viewed itself as a public utility and was willing to become impressed with a duty to serve the public. Having acquired and operated under this certificate for twenty-five years, and having never sought to have this certificate cancelled or modified, Tapoco's contention that it is not now nor ever has been a public utility is without merit.

The fact that Tapoco's certificate *required* it to provide power to Nantahala to serve its load at the Villages of Santeetlah and Tapoco is also proof that Tapoco is a public utility. One test used to determine whether a plant is a public utility is whether the public may enjoy it by right or by permission only. *Utilities Commission v. Water Co.*, 248 NC 27 (1958)

Finally, Tapoco's articles of incorporation state that one of the purposes of the corporation is to produce and provide

electric power to the public, and provide it with the powers of eminent domain. This power, combined with its having obtained a certificate of public convenience and necessity, and the fact that it produces and sells electricity to the public, has enabled Tapoco to condemn land as a public utility. Whether Tapoco has actually used this power is not clear, but the fact that it has had this power (and has implied threat of using it) for twenty-five years is strong evidence that Tapoco is a public utility.

In summary, the Commission concludes on three bases that Tapoco is a public utility in North Carolina and subject to this Commission's jurisdiction.

1. It is a public utility within the meaning of G.S. 62-3(23)a.

2. It is a public utility for rate-making purposes within the meaning of G.S. 62-3(23)b.

3. It is a public utility by virtue of having obtained a certificate of public convenience and necessity some twenty-five years ago, and having operated under that certificate since that time.

Having made a *de novo* determination that Tapoco is a public utility in North Carolina, the Commission elects to join Tapoco as a party to this proceeding. This case is before the Commission on remand with directions to the Commission "to obtain and consider information and data showing what Nantahala's cost of service to its customers would be if this method of ratemaking were used and whether Nantahala customers would benefit thereby." The Commission concludes that while Tapoco might provide the information voluntarily it is necessary for the Commission to make a determination which cannot be collaterally attacked. Additionally, it is only fair that Tapoco be present as a party to protect its interests in the event the Commission should decide to "roll in" its rates with those of Nantahala.

CONCLUSIONS RELATING TO ALCOA

Alcoa would not be a public utility under the definition contained in G.S. 62-3(23)a., and 62-3(23)b. However, Alcoa would be a public utility under the definition contained in G.S. 62-3(23)c. which states:

> "The term 'public utility' shall include all persons affiliated through stock ownership with a public utility doing business in this State as parent corporation or subsidiary corporation as defined in G.S. 55-2 to such an extent that the Commission shall find that such affiliation has an effect on the rates or service of such public utility."

G.S. 55-2(9) provides as follows:

> " 'Parent corporation' means a corporation which is a dominant shareholder, as herein defined. A corporation through which, by virtue of its shareholdings alone, a parent corporation has power to exercise the control which makes the latter a parent corporation is itself a parent corporation. A corporation with respect to which another corporation is a parent corporation is a 'subsidiary corporation.' "

G.S. 55-2(6) provides as follows:

> " 'Dominent shareholder' means a shareholder of a particular corporation, domestic or foreign, who by virtue of his shareholdings has legal power, either directly or indirectly or through another corporation or series of other corporations, domestic or foreign, to elect a majority of the directors of the said particular corporation."

In that Nantahala is a North Carolina public utility as defined by G.S. 62-3(23)a. and in that Alcoa owns all of the outstanding stock of Nantahala, it must follow that Alcoa is the parent corporation of Nantahala within the meaning of G.S. 62-3(23)c. and is a public utility.

Further, regarding whether the affiliation has an effect on Nantahala's rates within G.S. 62-3(23)c., the Commission

concludes from an examination of the new Fontana Agreement and the 1971 Apportionment Agreement, that Alcoa's affiliation with Nantahala has had an effect on Nantahala's rates. These agreements provide for the conveyance of most of Nantahala's power to TVA in return for an apportionment of power to Nantahala, and a further apportionment of power between Nantahala and Tapoco. These agreements obviously affect Nantahala's rates in a manner yet to be determined. The Commission concludes that Alcoa is a necessary and proper party for the Commission to make a determination which cannot be collaterally attacked.

IT IS, THEREFORE, ORDERED as follows:

1. That Alcoa is declared to be a public utility in North Carolina pursuant to G.S. 62-3(23)c. and subject to the jurisdiction of this Commission, and is hereby made a party respondent to this proceeding.

2. That Tapoco is declared to be a public utility in North Carolina and subject to the jurisdiction of this Commission, and is hereby made a party respondent in this proceeding.

ISSUED BY ORDER OF THE COMMISSION.

This the 3rd day of October 1980.

NORTH CAROLINA UTILITIES COMMISSION

/s/ SHARON C. CREDLE

Sharon C. Credle, *Deputy Clerk*

(SEAL)

APPENDIX D

North Carolina Utilities Commission Opinion,
dated August 12, 1982

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-13, SUB 35

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

Application of Nantahala Power and Light Company for Authority to Adjust and Increase its Electric Rates and Charges

ORDER DENYING PETITIONS AND MOTIONS FOR REHEARING AND RECONSIDERATION AND ORAL ARGUMENT

BY THE COMMISSION: On July 8, 1982, Nantahala Power and Light Company (Nantahala) filed Exceptions and Notice of Appeal to the Order of the Commission entered in this docket on June 8, 1982. Nantahala also filed on July 8, 1982, its Petition for Rehearing and Request for Oral Argument pursuant to G.S. 62-80 and G.S. 62-90(c) and filed a brief in support of the petition and request.

Also on July 8, 1982, Aluminum Company of America ("Alcoa") and Tapoco, Inc. ("Tapoco"), Respondents herein, filed their Exceptions to the Order of June 8, 1982; Notice of Appeal; and Motion for Reconsideration. In their Motion Alcoa and Tapoco requested, pursuant to G.S. 62-80, that the full Commission reconsider the Panel's Order of June 8 in light of the Exceptions and rescind and amend the Order in light of the exceptions or enter into a further hearing in the case. The Respondents, Alcoa and Tapoco, also filed on July 8, 1982, a

Motion for Oral Argument before the full Commission, requesting the opportunity to present oral argument to the full Commission on their exceptions.

On July 26, 1982, the Intervenors in this docket filed their Response to Applicant's and Respondents' Petition for Rehearing and Request for Oral Argument. In their response the Intervenors requested that the petitions for rehearing and oral argument be denied.

Upon careful consideration of the exceptions and the petitions and motions for rehearing and reconsideration and oral argument filed by the Applicant Nantahala and the Respondents herein, and the response thereto of the Intervenors, the Commission is of the opinion that the petitions and motions for reconsideration, rehearing, and oral argument should be denied.

IT IS, THEREFORE, ORDERED as follows:

1. That the Petition for Rehearing and Request for Oral Argument filed by Nantahala on July 8, 1982, be denied.

2. That the Motions for Reconsideration and Oral Argument filed by Alcoa and Tapoco on July 8, 1982, be denied.

ISSUED BY ORDER OF THE COMMISSION.

This the 12th day of August 1982.

NORTH CAROLINA UTILITIES COMMISSION

/s/ SHARON CREDLE MILLER

Sharon Credle Miller, *Deputy Clerk*

(SEAL)

APPENDIX E

Excerpts from the Federal Power Act, 16 U.S.C. §§ 791a-828c

SECTION 4, 16 U.S.C. § 797:

General powers of Commission

The Commission is authorized and empowered—

* * *

(e) *Issue of licenses for construction, etc., of dams, conduits, reservoirs, etc.*

To issue licenses to citizens of the United States, or to any association of such citizens, or to any corporation organized under the laws of the United States or any State thereof, or to any State or municipality for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any Government dam, except as herein provided: *Provided,* That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations: *Provided further,* That no license affecting the navigable capacity of any navigable waters of the United States shall be issued under the plans of the dam or other structures affecting the navigation have been approved by the Chief of Engineers and the Secretary of the Army. Whenever the contemplated improvement is, in the judgment of the Commission, desirable and justified in the public interest for the purpose of improving or developing a waterway

or waterways for the use or benefit of interstate or foreign commerce, a finding to that effect shall be made by the Commission and shall become a part of the records of the Commission: *Provided further,* That in case the Commission shall find that any Government dam may be advantageously used by the United States for public purposes in addition to navigation, no license therefor shall be issued until two years after it shall have reported to Congress the facts and conditions relating thereto, except that this provision shall not apply to any Government dam constructed prior to June 10, 1920: *And provided further,* That upon the filing of any application for a license which has not been preceded by a preliminary permit under subsection (f) of this section, notice shall be given and published as required by the proviso of said subsection.

* * *

SECTION 6, 16 U.S.C. § 799:

License; duration, conditions, revocation, alteration, or surrender

Licenses under this subchapter shall be issued for a period not exceeding fifty years. Each such license shall be conditioned upon acceptance by the licensee of all the terms and conditions of this chapter and such further conditions, if any, as the Commission shall prescribe in conformity with this chapter, which said terms and conditions and the acceptance thereof shall be expressed in said license. Licenses may be revoked only for the reasons and in the manner prescribed under the provisions of this chapter, and may be altered or surrendered only upon mutual agreement between the licensee and the Commission after thirty days' public notice. Copies of all licenses issued under the provisions of this subchapter and calling for the payment of annual charges shall be deposited with the General Accounting Office, in compliance with section 20 of title 41.

SECTION 10, 16 U.S.C. § 803:

Conditions of license generally

All licenses issued under this subchapter shall be on the following conditions:

(a) Modification of plans, etc., to secure adaptability of project

That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes; and if necessary in order to secure such plan the Commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval.

* * *

SECTION 201, 16 U.S.C. § 824:

Declaration of policy; application of subchapter

(a) Federal regulation of transmission and sale of electric energy

It is declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to generation to the extent provided in this subchapter and subchapter III of this chapter and of that part of such business which consists of the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce is necessary in the public interest, such Federal regulation, however, to extend only to those matters which are not subject to regulation by the States.

(b) Use or sale of electric energy in interstate commerce

(1) The provisions of this subchapter shall apply to the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce, but except as provided in paragraph (2) shall not apply to any other sale of electric energy or deprive a State or State commission of its lawful authority now exercised over the exportation of hydroelectric energy which is transmitted across a State line. The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, but shall not have jurisdiction, except as specifically provided in this subchapter and subchapter III of this chapter, over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter.

* * *

(c) Electric energy in interstate commerce

For the purpose of this subchapter, electric energy shall be held to be transmitted in interstate commerce if transmitted from a State and consumed at any point outside thereof; but only insofar as such transmission takes place within the United States.

(d) "Sale of electric energy at wholesale" defined

The term "sale of electric energy at wholesale" when used in this subchapter, means a sale of electric energy to any person for resale.

(e) "Public utility" defined

The term "public utility" when used in this subchapter and subchapter III of this chapter means any person who owns or operates facilities subject to the jurisdiction of the Commission under this subchapter (other than facilities subject to such jurisdiction solely by reason of section 824i, 824j, or 824k of this title).

* * *

SECTION 205, 16 U.S.C. § 824d:

Rates and charges; schedules; suspension of new rates; automatic adjustment clauses

(a) Just and reasonable rates

All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.

(b) Preference or advantage unlawful

No public utility shall, with respect to any transmission or sale subject to the jurisdiction of the Commission, (1) make or grant any undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage, or (2) maintain any unreasonable difference in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.

(c) Schedules

Under such rules and regulations as the Commission may prescribe, every public utility shall file with the Commission, within such time and in such form as the Commission may designate, and shall keep open in convenient form and place for public inspection schedules showing all rates and charges for any transmission or sale subject to the jurisdiction of the Commission, and the classifications, practices, and regulations affecting such rates and charges, together with all contracts which in any manner affect or relate to such rates, charges, classifications, and services.

(d) Notice required for rate changes

Unless the Commission otherwise orders, no change shall be made by any public utility in any such rate, charge, classification, or service, or in any rule, regulation, or contract relating thereto, except after sixty days' notice to the Commission and

to the public. Such notice shall be given by filing with the Commission and keeping open for public inspection new schedules stating plainly the change or changes to be made in the schedule or schedules then in force and the time when the change or changes will go into effect. The Commission, for good cause shown, may allow changes to take effect without requiring the sixty days' notice herein provided for by an order specifying the changes so to be made and the time when they shall take effect and the manner in which they shall be filed and published.

(e) Suspension of new rates; hearings; five month period

Whenever any such new schedule is filed the Commission shall have authority, either upon complaint or upon its own initiative without complaint, at once, and, if it so orders, without answer or formal pleading by the public utility, but upon reasonable notice, to enter upon a hearing concerning the lawfulness of such rate, charge, classification, or service; and, pending such hearing and the decision thereon, the Commission, upon filing with such schedules and delivering to the public utility affected thereby a statement in writing of its reasons for such suspension, may suspend the operation of such schedule and defer the use of such rate, charge, classification, or service, but not for a longer period than five months beyond the time when it would otherwise go into effect; and after full hearings, either completed before or after the rate, charge, classification, or service goes into effect, the Commission may make such orders with reference thereto as would be proper in a proceeding initiated after it had become effective. If the proceeding has not been concluded and an order made at the expiration of such five months, the proposed change of rate, charge, classification, or service shall go into effect at the end of such period, but in case of a proposed increased rate or charge, the Commission may by order require the interested public utility or public utilities to keep accurate account in detail of all amounts received by reason of such increase, specifying by whom and in whose behalf such amounts are paid, and upon completion of the hearing and decision may by

further order require such public utility or public utilities to refund, with interest, to the persons in whose behalf such amounts were paid, such portion of such increased rates or charges as by its decision shall be found not justified. At any hearing involving a rate or charge sought to be increased, the burden of proof to show that the increased rate or charge is just and reasonable shall be upon the public utility, and the Commission shall give to the hearing and decision of such questions preference over other questions pending before it and decide the same as speedily as possible.

(f) Review of automatic adjustment clauses and public utility practices; action by Commission; definition

(1) Not later than 2 years after November 9, 1978, and not less often than every 4 years thereafter, the Commission shall make a thorough review of automatic adjustment clauses in public utility rate schedules to examine—

(A) whether or not each such clause effectively provides incentives for efficient use of resources (including economical purchase and use of fuel and electric energy), and

(B) whether any such clause reflects any costs other than costs which are—

(i) subject to periodic fluctuations and

(ii) not susceptible to precise determinations in rate cases prior to the time such costs are incurred.

Such review may take place in individual rate proceedings or in generic or other separate proceedings applicable to one or more utilities.

(2) Not less frequently than every 2 years, in rate proceedings or in generic or other separate proceedings, the Commission shall review, with respect to each public utility, practices under any automatic adjustment clauses of such utility to insure efficient use of resources (including economical purchase and use of fuel and electric energy) under such clauses.

(3) The Commission may, on its own motion or upon complaint, after an opportunity for an evidentiary hearing, order a public utility to—

(A) modify the terms and provisions of any automatic adjustment clause, or

(B) cease any practice in connection with the clause,

if such clause or practice does not result in the economical purchase and use of fuel, electric energy, or other items, the cost of which is included in any rate schedule under an automatic adjustment clause.

(4) As used in this subsection, the term "automatic adjustment clause" means a provision of a rate schedule which provides for increases or decreases (or both), without prior hearing, in rates reflecting increases or decreases (or both) in costs incurred by an electric utility. Such term does not include any rate which takes effect subject to refund and subject to a later determination of the appropriate amount of such rate.

SECTION 206, 16 U.S.C. § 824e:

Power of Commission to fix rates and charges; determination of cost of production or transmission

(a) Unjust or preferential rates, etc.

Whenever the Commission, after a hearing had upon its own motion or upon complaint, shall find that any rate, charge, or classification, demanded, observed, charged, or collected by any public utility for any transmission or sale subject to the jurisdiction of the Commission, or that any rule, regulation, practice, or contract affected such rate, charge, or classification is injust, unreasonable, unduly discriminatory or preferential, the Commission shall determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order.

(b) Investigation of costs

The Commission upon its own motion, or upon the request of any State commission whenever it can do so without prejudice to the efficient and proper conduct of its affairs, may investigate and determine the cost of the production or transmission of electric energy by means of facilities under the jurisdiction of the Commission in cases where the Commission has no authority to establish a rate governing the sale of such energy.

SECTION 306, 16 U.S.C. § 825e:

Any person, State, municipality, or State commission complaining of anything done or omitted to be done by any licensee or public utility in contravention of the provisions of this chapter may apply to the Commission by petition which shall briefly state the facts, whereupon a statement of the complaint thus made shall be forwarded by the Commission to such licensee or public utility, who shall be called upon to satisfy the complaint or to answer the same in writing within a reasonable time to be specified by the Commission. If such licensee or public utility shall not satisfy the complaint within the time specified or there shall appear to be any reasonable ground for investigating such complaint, it shall be the duty of the Commission to investigate the matters complained of in such manner and by such means as it shall find proper.

APPENDIX F

Excerpts from the North Carolina Public Utilities Act, N.C. Gen. Stat. §§ 62-1, *et seq.*

§ 62-133. HOW RATES FIXED.

(a) In fixing the rates for any public utility subject to the provisions of this Chapter, other than motor carriers and certain water and sewer utilities, the Commission shall fix such rates as shall be fair both to the public utility and to the consumer.

(b) In fixing such rates, the Commission shall:

(1) Ascertain the reasonable original cost of the public utility's property used and useful, or to be used and useful within a reasonable time after the test period, in providing the service rendered to the public within this State, less than portion of the cost which has been consumed by previous use recovered by depreciation expense plus the reasonable original cost of investment in plant under construction (construction work in progress). In ascertaining the cost of the public utility's property, construction work in progress as of the effective date of this subsection shall be excluded until such plant comes into service but reasonable and prudent expenditures for construction work in progress after the effective date of this subsection may be included, to the extent the Commission considers such inclusion in the public interest and necessary to the financial stability of the utility in question, subject to the provisions of subparagraph (b)(5) of this section.

(2) Estimate such public utility's revenue under the present and proposed rates.

(3) Ascertain such public utility's reasonable operating expenses, including actual investment currently consumed through reasonable actual depreciation.

(4) Fix such rate of return on the cost of the property ascertained pursuant to subdivision (1) as will enable the public utility by sound management to produce a fair return for its shareholders, considering changing economic conditions and other factors, as they then exist,

to maintain its facilities and services in accordance with the reasonable requirements of its customers in the territory covered by its franchise, and to compete in the market for capital funds on terms which are reasonable and which are fair to its customers and to its existing investors.

(4a) Require each public utility to discontinue capitalization of the composite carrying cost of capital funds used to finance construction (allowance for funds) on the construction work in progress included in its rate based upon the effective date of the first and each subsequent general rate order issued with respect to it after the effective date of this subsection; allowance for funds may be capitalized with respect to expenditures for construction work in progress not included in the utility's property upon which the rates were fixed. In determining net operating income for return, the Commission shall not include any capitalized allowance for funds used during construction on the construction work in progress included in the utility's rate base.

(5) Fix such rates to be charged by the public utility as will earn in addition to reasonable operating expenses ascertained pursuant to subdivision (3) of this subsection the rate of return fixed pursuant to subdivisions (4) and (4a) on the cost of the public utility's property ascertained pursuant to subdivision (1).

(c) The original cost of the public utility's property, including its construction work in progress, shall be determined as of the end of the test period used in the hearing and the probable future revenues and expenses shall be based on the plant and equipment in operation at that time. The test period shall consist of 12 months' historical operating experience prior to the date the rates are proposed to become effective, but the Commission shall consider such relevant, material and competent evidence as may be offered by any party to the proceeding tending to show actual changes in costs, revenues or the cost of

the public utility's property used and useful, or to be used and useful within a reasonable time after the test period, in providing the service rendered to the public within this State, including its construction work in progress, which is based upon circumstances and events occurring up to the time the hearing is closed.

(d) The Commission shall consider all other material facts of record that will enable it to determine what are reasonable and just rates.

(e) The fixing of a rate of return shall not bar the fixing of a different rate of return in a subsequent proceeding.

(f) Unless otherwise ordered by the Commission subsections (b), (c), and (d) shall not apply to rate changes of utilities engaged in the distribution of natural gas bought at wholesale by the utility for distribution to consumers to the extent such rate changes are occasioned by changes in the wholesale rate of such natural gas. The Commission may permit such rate changes to become effective simultaneously with the effective date of the change in the wholesale cost of such natural gas, or at such other time as the Commission may direct. This subsection shall not prohibit the Commission from investigating and changing unreasonable rates in accordance with the provisions of this Chapter. The public utility shall give such notice, which may include notice by publication, of the changes to interested parties as the Commission in its discretion may direct.

(g) Reserved.

(h) The Commission is not authorized to entertain applications filed on behalf of intrastate rail carriers to fix rates for a single commodity or to fix rates for groups of commodities which constitute less than a general rate increase.

APPENDIX G

Notices of Appeal

SUPREME COURT OF NORTH CAROLINA

No. 111A84

UTILITIES COMMISSION

Docket No. E-13, Sub 35

STATE OF NORTH CAROLINA, ex rel. Utilities Commission; RUFUS L. EDMISTEN, Attorney General; PUBLIC STAFF; HENRY J. TRUETT; CHEROKEE, GRAHAM and JACKSON COUNTIES; TOWNS OF ANDREWS, BRYSON CITY, DILLSBORO, ROBBINSVILLE and SYLVA; SWAIN COUNTY BOARD OF COUNTY COMMISSIONERS: DEROL CRISP; and THE TRIBAL COUNCIL OF THE EASTERN BAND OF CHEROKEE INDIANS,

Appellees,

v.

NANTAHALA POWER AND LIGHT COMPANY; ALUMINUM COMPANY OF AMERICA; and TAPOCO, INC.,

Appellants.

NOTICE OF APPEAL TO THE SUPREME COURT OF THE UNITED STATES

Notice is hereby given that Aluminum Company of America appeals to the Supreme Court of the United States from the final judgment of the Supreme Court of North Carolina entered herein on August 13, 1985. This appeal is taken pursuant to 28 U.S.C. § 1257(2).

Respectfully submitted this 18th day of September 1985.

LEBOEUF, LAMB, LEIBY & MACRAE

By: /s/ RONALD D. JONES

Ronald D. Jones
336 Fayetteville Street
P.O. Box 750
Raleigh, North Carolina 27602
(919) 833-9789

CERTIFICATE OF SERVICE

This is to certify that the foregoing Notice of Appeal of Aluminum Company of America, dated September 18, 1985, has been served upon the following individuals by depositing a copy of said document in the United States Mail, postage prepaid, addressed as follows:

Robert C. Howison, Jr.
Edward S. Finley, Jr.
Hunton and Williams
BB&T Building
Raleigh, NC 27602

Lacy Thornburg
Richard L. Griffin
N.C. Department of Justice
Post Office Box 629
Raleigh, NC 27602

Robert Gruber
James D. Little
Public Staff
Utilities Commission
430 N. Salisbury Street
Post Office Box 991
Raleigh, NC 27602

Charles L. Lewis
Assistant Attorney General
State of Tennessee
450 James Robertson Parkway
Nashville, TN 37219

James N. Horwood
Spiegel & McDiarmid
Suite 1100
1350 New York Ave., NW
Washington, D.C. 20005-4798

Robert F. Page
Crisp, Davis, Schwentker & Page
Post Office Box 751
Raleigh, NC 27602

Larry Nestor
Western Carolina Legal Services
Post Office Box 426
Sylva, NC 28779

Fred Moddy [sic]
McKeever, Edwards, Davis & Hays
Post Office Box 596
Murphy, NC 28906

Roderick Magie
Mayer & Magie
Post Office Box 750
Highlands, NC 28741

/s/ SAM BEHRENDS, IV
Samuel Behrends, IV

SUPREME COURT OF NORTH CAROLINA

TENTH DISTRICT

No. 111A84

FROM THE NORTH CAROLINA SUPREME COURT

CASE NO 111A84—Utilities

Decided August 13, 1985

STATE OF NORTH CAROLINA, ex rel. Utilities Commission; Lacy H. Thornburg, ATTORNEY GENERAL; PUBLIC STAFF, HENRY J. TRUETT; CHEROKEE, GRAHAM and JACKSON COUNTIES; TOWNS OF ANDREWS, BRYSON CITY, DILLSBORO, ROBBINSVILLE and SYLVA; and THE TRIBAL COUNCIL OF THE EASTERN BAND OF CHEROKEE INDIANS,

Appellees,

v.

NANTAHALA POWER AND LIGHT COMPANY; ALUMINUM COMPANY OF AMERICA; and TAPOCO, INC.,

Appellants.

NOTICE OF APPEAL TO THE UNITED STATES SUPREME COURT BY NANTAHALA POWER AND LIGHT COMPANY

TO THE HONORABLE SUPREME COURT OF THE UNITED STATES

Applicant Nantahala Power and Light Company (hereinafter Nantahala) hereby appeals to the United States Supreme Court from the judgment of the North Carolina Supreme Court in Case No. 111A84—Utilities, issued August 13, 1985,

affirming the North Carolina Utilities Commission orders issued June 8, 1982, 12 August 1982, and September 1, 1982 in Docket No. E-13, Sub 35.

The judgment of the North Carolina Supreme Court affirmed the North Carolina Utilities Commission's order reducing Nantahala's retail rates and requiring Nantahala to make refunds to its retail customers.

Nantahala gives notice that it appeals from the entire above described judgment of the North Carolina Supreme Court on the ground that the North Carolina Supreme Court upheld the validity of a North Carolina statute, as the term has been interpreted under 28 U.S.C. § 1257(2) and its predecessors, which statute had been challenged on the ground of its being repugnant to the Constitution and laws of the United States. Nantahala's notice of appeal is taken pursuant to 28 U.S.C. § 1257(2).

NANTAHALA POWER AND LIGHT COMPANY

By: /s/ EDWARD S. FINLEY, JR.
Counsel

OF COUNSEL:

Edward S. Finley, Jr.
William D. Johnson
HUNTON & WILLIAMS
Post Office Box 109
Raleigh, North Carolina 27602
(919) 828-9371

AFFIDAVIT OF SERVICE

EDWARD S. FINLEY, JR., being first duly sworn, deposes and says that he is counsel for Nantahala Power and Light Company and that he has served a copy of the foregoing NOTICE OF APPEAL TO THE UNITED STATES SUPREME COURT upon all parties of record by depositing said copies in an official depository of the United States Postal Service, first-class postage prepaid, addressed as below, this the 22 day of August, 1985.

Sworn to and subscribed to
before me this the 22 day
of August, 1985.

/s/ KAYE B. ORCUTT
Notary Public
My Commission Expires: 8/10/87

Robert Gruber, Esq.
James D. Little, Esq.
Public Staff
North Carolina Utilities Commission
Post Office Box 29520
Raleigh, NC 27626-0520

Hon. Lacy Thornburg, Esq.
Richard L. Griffin, Esq.
Suite 207
Hayes & Hobson Building
20 South Spruce Street
Asheville, NC 28801

James N. Horwood, Esq.
Cynthia Bogorad, Esq.
Spiegel & McDiarmid
Suite 1100
1350 New York Ave., N.W.
Washington, D.C. 20005-4798

Ronald D. Jones, Esq.
David R. Poe
LeBoeuf, Lamb, Leiby & MacRae
520 Madison Avenue
New York, NY 10022

Fred H. Moody, Jr., Esq.
McKeever, Edwards, Davis & Hayes, P.A.
Post Office Box 670
Bryson City, NC 28713

Larry Nestor, Esq.
Western Carolina Legal Services
Post Office Box 426
Sylva, NC 28779

Charles L. Lewis, Esq.
Assistant Attorney General
State of Tennessee
450 James Robertson Parkway
Nashville, TN 37219

Roderick Magie, Esq.
Mayer & Magie
Post Office Box 750
Highlands, NC 28741

Robert B. Schwentker, Esq.
Crisp, Davis, Schwentker & Page
Post Office Box 751
Raleigh, NC 27602

Robert H. Bennink, Jr., Esq.
Legal Division
North Carolina Utilities Commission
Post Office Box 29520
Raleigh, NC 27626

SUPREME COURT OF NORTH CAROLINA

TENTH DISTRICT

No. 111A84

UTILITIES COMMISSION

Docket No. E-13, Sub 35

STATE OF NORTH CAROLINA, ex rel. Utilities Commission; RUFUS L. EDMISTEN, Attorney General; PUBLIC STAFF; HENRY J. TRUETT; CHEROKEE, GRAHAM and JACKSON COUNTIES; TOWNS OF ANDREWS, BRYSON CITY, DILLSBORO, ROBBINSVILLE and SYLVA; SWAIN COUNTY BOARD OF COUNTY COMMISSIONERS: DEROL CRISP; and THE TRIBAL COUNCIL OF THE EASTERN BAND OF CHEROKEE INDIANS,

Appellees,

v.

NANTAHALA POWER AND LIGHT COMPANY; ALUMINUM COMPANY OF AMERICA; and TAPOCO, INC.,

Appellants.

NOTICE OF APPEAL TO THE SUPREME COURT OF THE UNITED STATES

Notice is hereby given that Tapoco, Inc. appeals to the Supreme Court of the United States from the final judgment of the Supreme Court of North Carolina entered herein on August 13, 1985. This appeal is taken pursuant to 28 U.S.C. § 1257(2).

Respectfully submitted this 23rd day of September, 1985.

LEBOEUF, LAMB, LEIBY & MACRAE

/s/ DAVID R. POE

David R. Poe
336 Fayetteville Street
P.O. Box 750
Raleigh, North Carolina 27602
(919) 833-9789

CERTIFICATE OF SERVICE

This is to certify that the foregoing Notice of Appeal of Tapoco, Inc., dated September 23, 1985, has been served upon the following individuals by depositing a copy of said document in the United States Mail, postage prepaid, addressed as follows:

Robert C. Howison, Jr.
Edward S. Finley, Jr.
Hunton and Williams
BB&T Building
Raleigh, NC 27602

Lacy Thornburg
Richard L. Griffin
N.C. Department of Justice
Post Office Box 629
Raleigh, NC 27602

Robert Gruber
James D. Little
Public Staff
Utilities Commission
430 N. Salisbury Street
Post Office Box 991
Raleigh, NC 27602

Charles L. Lewis
Assistant Attorney General
State of Tennessee
450 James Robertson Parkway
Nashville, Tenn. 37219

James N. Horwood
Spiegel & McDiarmid
Suite 1100
1350 New York Avenue, NW
Washington, D.C. 20005-4798

Robert F. Page
Crisp, Davis, Schwentker & Page
Post Office Box 751
Raleigh, NC 27602

Larry Nestor
Western Carolina Legal Services
Post Office Box 426
Sylva, NC 28779

Fred Moody
McKeever, Edwards, Davis & Hays
Post Office Box 596
Murphy, NC 28906

Roderick Magie
Mayer & Magie
Post Office Box 750
Highlands, NC 28741

/s/ SAM BEHRENDS, IV
Samuel Behrends, IV

APPENDIX H

Supplement to Rule 28.1 Statement

FIRMS (OTHER THAN WHOLLY-OWNED SUBSIDIARIES) IN WHICH ALUMINUM COMPANY OF AMERICA HAS OWNERSHIP INTERESTS

Adela Investment Company S.A.
Alcoa Aluminio S.A.
Alcoa Aluminio do Nordeste S.A.—ALCONOR
Alcoa Mineracao S.A.
Mineracao Ceu Estrelado Limitada
Alumar Administracao De Bens S.A. (Realumar)
Alumar Administracao Industrial S.A. (Alumar)
Companhia Geral De Minas
Imobiliaria Vargem Dos Bois S/C Ltda.
Empresa Imobiliaria Maranhense Ltda.
Ideal Dominicana S.A.
Alcoa-NEC Communications Corp.
Alcoa Nederland B.V.
Alumet Etten B.V.
Intal B.V.
Lips-Levolor B.V.
Alcoa of Australia Limited
A.F.P. Pty. Limited
Alcoa (Bunbury) Pty. Limited
Alcoa of Australia (Asia) Limited
Coala Insurance Company Limited
Dowell Australia Limited
Acme Metal Works. Ltd.
Dowell Brett Pty. Limited
T.G.A. Pty. Limited
The Glass & Aluminum Suppliers Pty. Limited
Portland Smelter Services Pty. Ltd.
Alcoa of Great Britain Limited
Alcoa Extruded Products CUK Limited
Alcoa Manufacturing (G.B.) Limited
MRCP Limited
Aluwhite Electropaint Limited
Alcoa Conductor Accessories, Inc.

Alcoa Fujikura Ltd.
Aludril, Inc.
Aludrum B.V.
Lamitref Aluminum N.V.
Pimalco, Inc.
Induction Billet Corporation
Pimalco Seamless, Inc.
Drumalu B.V.
Forges de Bologne
Hopewell International Insurance Ltd.
United Insurance Company
Universal Insurance Company of Ireland Limited
Delta International Insurance Company Limited
Delta Holdings, Inc.
Delta America Re Insurance Company
Delta International Insurance Company Limited
Lancer Financial Group
Delaney Management Company, Inc.
Lancer Insurance Company
Transit Casualty Syndicate, Inc.
Aguas Industriales "La Presa" A.C.
Capsulas Metalicas, S.A.
Ceramics Process Systems Corporation
Complejo Industrial Pedernales, S.A.
Corporation For Innovation Development (CID)
Greater Lebanon Hotel Enterprises, Inc.
Grupo Aluminio, S.A. de C.V.
Almexa, S.A. de C.V.
Aluminio, S.A. de C.V.
Inmobiliaria Aluminio, S.A. de C.V.
Halco (Mining) Inc.
Boke Service Company, S.A.
Boke Trading, Inc.
Campagnie Des Bauxites De Guinee (CBG)
Inversiones Araco Compania Anonima
Aco, Sociedad Anonima
Flotillera Oriental, Compania Anonima

Aco Inversora, S.A.
Aco, Sociedad Anonima
Aco, Sociedad Anonima
Aco Inversora, S.A.
Aco, Sociedad Anonima
Auto Cabimas, Sociedad Anonima
Inversora Baralt, C.A.
Inversora Central C.A.
Lago Motors, C.A.
Valfor, Sociedad Anonima
Arrendamientos Aco, S.A.
Auto Cabimas, Sociedad Anonima
Auto Caracas, Sociedad Anonima
Auto Oriente Maturin, S.A.
Auto Oriente, S.A.
Aco Alquiler S.A.
Automotriz Vigia S.A.
Agro Andina, S.A.
Automotriz Panamericana, S.A.
Inversora Central C.A.
Lago Motors, Compania Anonima
Tractosur C.A.
Centromotriz Zulia, C.A.
Cummins de Venezuela, S.A. (CUMMINSA)
Fabrica of Carrocerias Centauro, C.A.
Fabrica Nacional De Tractores Y Motores, S.A.
"FANATRACTO"
Hidromex Venezolana C.A.
Inversiones Rialpe, S.A.
Inversora Baralt, C.A.
Inversora Orinoco, C.A.
Lamax S.A.
Aco Inversora, S.A.
Motoriente Ciudad Bolivar C.A.
Motoriente San Felix, S.A.
Motoservicio Ciudad Bolivar, C.A.
Motoriente San Felix, S.A.

Motoriente Ciudad Bolivar, C.A.
Motoservicio San Felix, C.A.
Talleres Unidos De Occidente, C.A.
Centromotriz Zulia, C.A.
Franquicias Unidas Occidente, S.A.
Talleres Unidos De Occidente, C.A.
Automotriz Veritas, S.A.
Flotillera Oriental, Compania Anonima
Talleres Unidos, C.A. (TAUNICA)
Administradora Maracay, C.A.
Amortiguadores, S.A.
Auto Cabimas, Sociedad Anonima
Auto Caracas, Sociedad Anonima
Aco Alquiler S.A.
Aco Alquiler Barquisimeto, S.A.
Aco Alquiler Occidente, S.A.
Aco Alquiler Oriente, S.A.
Flotillas Y Arrendamientos (Floarca), C.A.
Auto Oriente, Sociedad Anonima
Flotillera Oriental, Compania Anonima
Auto Oriente Maturin, S.A.
Flotillera Oriental, Compania Anonima
Autoservicio Maturin, C.A.
Grupo Covenal Mariara, C.A.
Indutrias Fairbanks Morse De Venezuela, S.A.
Inversora Baralt, C.A.
Inversora Central, S.A.
Automotriz Veritas, S.A.
Inversora Covenal, S.A.
Inversiones Auven, C.A.
Inversora Orinoco, C.A.
Aco Alquiler, S.A.
Aco Inversora, S.A.
Auto Oriente Maturin, S.A.
Auto Oriente, Sociedad Anonima
Motoriente Anaco, C.A.
Aco Alquiler Oriente, S.A.

Motoriente Ciudad Bolivar, C.A.
Motoriente El Tigre, C.A.
Aco Alquiler Oriente, C.A.
Motoriente San Felix, C.A.
Occidente Motors, S.A.
Inversora Veritas, S.A.
Lago Motors, Compania Anonima
Immobiliaria Araure (INMAR, S.A.)
Aco Alquiler, S.A.
Cummins de Venezuela, S.A. (CUMMINSA)
Maquinarias Y Servicios Aco, S.A.
Maquinarias Y Servicios Aco, S.A.
Talleres Unidos, C.A. (TAUNICA)
Aco, Sociedad Anonima
Valfor, Sociedad Anonima
Aco Inversora, S.A.
Auto Cabimas, Sociedad Anonima
Auto Inversora Lamax, S.A.
Automotriz, Panamericana, S.A.
Automotriz Vigia, S.A.
Franquicias Unidas Occidente, S.A.
Industrial Vigia, S.A.
Inversora Central, C.A.
Inversora Baralt, C.A.
Lago Motors, C.A.
Tractosur, C.A.
Auto Cabimas, Sociedad Anonima
Aco Inversora, S.A.
Aco, Sociedad Anonima
Amuay Motors, C.A.
Auto Inversora Lamax, S.A.
Auto Servicio Cabimas, Sociedad Anonima
Franquicias Unidas Occidente, S.A.
Amuay Motor, C.A.
Automotriz Veritas, S.A.
Automotriz Veritas, S.A.
Talleres Unidos De Occidente, C.A.

Deformaciones Plasticas de Metales, C.A.
Forauto, C.A.
Aco Alquiler, S.A.
Agroven, C.A.
Grupo Covenal Mariara, C.A.
Inversiones Almonital, C.A.
Filtravedo, S.A.
Procesos Galvanicos, S.A. "PROGAL"
Sicam de Venezuela, S.A.
Fabrica National De Forros Y Accesorios Para Carros, C.A.
Enmar, C.A.
Inversiones Auven, C.A.
C.A. Venezolana de Produccion Renault
Constructora Venezolana de Vehiculos, C.A.
Filtravedo, S.A.
Inversora Covenal, S.A.
Metalmar, C.A.
Industrias Mariara S.A. "INDUMAR"
Tupla, C.A.
Inversiones Metalurgicas, C.A.
Administradora Maracay, C.A.
Amortiguadores, C.A.
La Casa Del Amortiguador, S.A.
Auto-Amortiguadores Maturin S.R.L.
La Casa Del Amortiguador Barquisimeto, S.A.
Sinterizados Del Caribe, C.A.
Estampados Del Caribe, C.A.
Trefilerias Mariara, C.A.—TREMARCA
La Casa Del Amortiguador, S.A.
Tupla, C.A.
Tupla, C.A.
Inversiones Araco Compania Anonima
Inversora Baralt, C.A.
Inversora Central, C.A.
Lago Motors, Compania Anonima
Aco, Sociedad Anonima
Amuay Motors, C.A.

Franquicias Unidas Occidente, S.A.
Auto Inversora Lamax, S.A.
Agroven, C.A.
Aco Alquiler Occidente, S.A.
Indutrial Vigia, S.A.
Aco Inversora, S.A.
Aco, Sociedad Anonima
Auto Cabimas, S.A.
Auto Inversora Lamax, S.A.
Automotriz Panamericana, S.A.
Automotriz Vigia, S.A.
Franquicias Unidas Occidente, S.A.
Inversora Baralt, C.A.
Inversora Central, C.A.
Lago Motors, C.A.
Inversora Central, C.A.
Lamax, S.A.
Aco Alquiler Barquisimeto, S.A.
Occidente Motors, S.A.
Aco Alquiler Barquisimeto, S.A.
Inversiones Rialpe, S.A.
Inversiones Rialpe, S.A.
Mineraria Silius, S.p.A.
Fluorsid, S.p.A.
Moralco Limited
Norsk Alcoa A/S
A/S Skibsinvestering
Norsk Alcoa A/S
Mosal Aluminum
Elkem A/S & Co. (Partnership)
Shibazaki Seisakusho Limited
Shibazaki Metal Print Co., Ltd.
Oak Mountain Office Part, Inc.
n.v. hotelmaatschappij "TORARICA"
Swanal Limited
Universal Adsorbents Incorporated